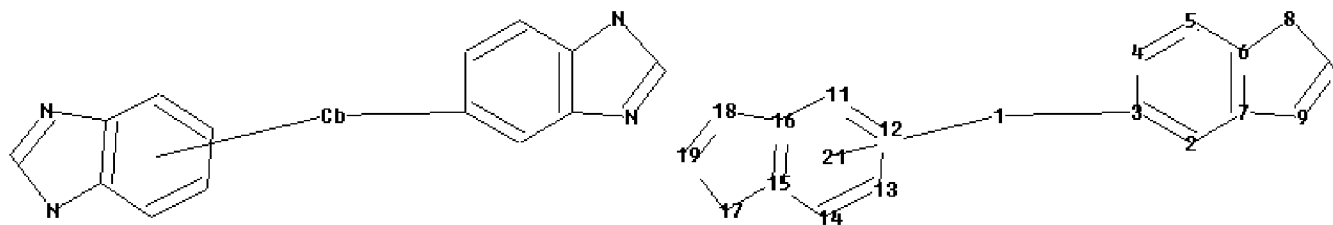


STN Search 11594323



chain nodes :

1

ring nodes :

2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

chain bonds :

1-3

ring bonds :

2-3 2-7 3-4 4-5 5-6 6-7 6-8 7-9 8-10 9-10 11-12 11-16 12-13 13-14 14-15

15-16 15-17 16-18 17-19 18-19

exact/norm bonds :

6-8 7-9 8-10 9-10 15-17 16-18 17-19 18-19

exact bonds :

1-3

normalized bonds :

2-3 2-7 3-4 4-5 5-6 6-7 11-12 11-16 12-13 13-14 14-15 15-16

G1:Cb,Hy,Ak

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom

11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom

21:Atom

Generic attributes :

1:

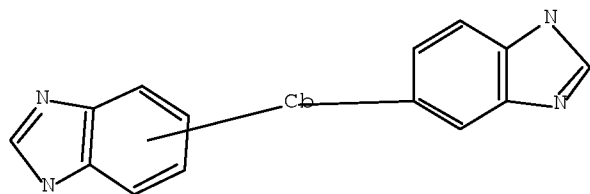
Saturation : Unsaturated

L1 STRUCTURE UPLOADED

=> d 11

L1 HAS NO ANSWERS

L1 STR



G1 Cb,Hy,Ak

Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 15:14:54 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 4492 TO ITERATE

44.5% PROCESSED 2000 ITERATIONS

0 ANSWERS

INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS: 85821 TO 93859

PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s l1 full

This file contains CAS Registry Numbers for easy and accurate substance identification.

The ALL, BIB, MAX, and STD display formats in the CA/CAPLUS family of databases will soon be updated to include new citing references information. This enhancement may impact record import into database management software. For additional information, refer to NEWS 22.

=> s l3

L4 8 L3

=> d ibib abs hitstr 1-8

L4 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2009:164382 CAPLUS Full-text

DOCUMENT NUMBER: 150:380780

TITLE: Carbon membranes from blends of PBI and polyimides for N₂/CH₄ and CO₂/CH₄ separation and hydrogen purification

AUTHOR(S): Hosseini, Seyed Saeid; Chung, Tai Shung

CORPORATE SOURCE: Department of Chemical and Biomolecular Engineering, National University of Singapore, Singapore, 119260, Singapore

SOURCE: Journal of Membrane Science (2009), 328(1+2), 174-185
CODEN: JMESDO; ISSN: 0376-7388

PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

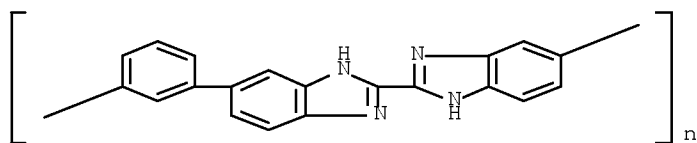
AB Membranes composed of poly(benzimidazole) (PBI) and various polyimides were studied as homogeneous blend precursors with suitable morphol. for fabrication of carbon mol. sieve membranes for gas separation. Correlations were established between the pyrolysis process parameters for the precursors and separation performance of the carbon membranes. Compared to Torlon and P84, Matrimid is a better choice for blend precursors in combination with PBI. Carbon membranes prepared from PBI/Matrimid are suitable for H₂/CO₂ separation. Good performance for separation of other gas pairs was attained by tuning the PBI content in precursor. Modification of precursors by chemical crosslinking prior to carbonization led to carbon membranes with enhanced selectivity for separation of H from both N and CO₂ mixts. The carbon membranes surpass several separation performance trade-offs with great potential for various industrial applications including CO₂/CH₄ (α = 203.95), H₂/CO₂ (α = 33.44) and particularly N₂/CH₄ separation with high permeability (P_{N_2} = 2.78 Barrer) and selectivity (α = 7.99) for this gas pair.

IT 27027-46-9D, xylenediamine-crosslinked polymers
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(preparation and performance of carbon mol. sieve membranes by carbonization

of blends of PBI and polyimides for gas mixture separation and hydrogen purification)

RN 27027-46-9 CAPLUS

CN Poly([2,2'-bi-1H-benzimidazole]-5,5'-diyl-1,3-phenylene) (CA INDEX NAME)



REFERENCE COUNT: 63 THERE ARE 63 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2008:324853 CAPLUS Full-text

DOCUMENT NUMBER: 148:518439

TITLE: Hydrogen separation and purification in membranes of miscible polymer blends with interpenetration networks
AUTHOR(S): Hosseini, Seyed Saeid; Teoh, May May; Chung, Tai Shung
CORPORATE SOURCE: Department of Chemical and Biomolecular Engineering, National University of Singapore, Singapore, 119260, Singapore

SOURCE: Polymer (2008), 49(6), 1594-1603
CODEN: POLMAG; ISSN: 0032-3861

PUBLISHER: Elsevier Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB This study demonstrates the successful implications of blending technique combined with chemical modification for the fabrication of high performance polymeric membranes for gas separation applications. The effect of variation in composition on miscibility and microstructure, gas permeability and selectivity of blend membranes is investigated. It is found that augmentation

in PBI composition results in enhancement in gas separation performance of membranes which is attributed mainly to the effect of diffusivity selectivity. Anal. of the microstructure of membranes confirms the variations in chain packing d., d-spacing, and segmental mobility of polymer chains as a result of blending. Separation performance of membranes is further ameliorated through chemical modification of blend constituents. Modification of PBI phase with p-xylene dichloride brings about slight improvements in selectivity performance, especially for H₂/CO₂ and H₂/N₂. In contrast, the selectivity of membranes is improved significantly after crosslinking of Matrimid phase with p-xylene diamine. The results indicate that higher tendency of Matrimid toward crosslinking reaction contributes more in controlling the transport properties of membranes through diffusion coefficient by increase in chain packing d. and diminishing the excess free vols. Results obtained in this study reveal the promising features of developed membranes for gas separation applications with great potential for hydrogen separation and purification on industrial scale.

IT 27027-46-9

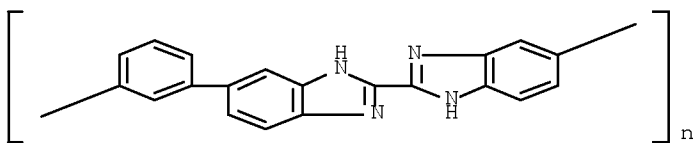
RL: POF (Polymer in formulation); PRP (Properties); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)

(blends; hydrogen separation and purification in membranes of miscible polymer

blends with interpenetration networks)

RN 27027-46-9 CAPLUS

CN Poly([2,2'-bi-1H-benzimidazole]-5,5'-diyl-1,3-phenylene) (CA INDEX NAME)



IT 27027-46-9DP, reaction products with xylene dichloride

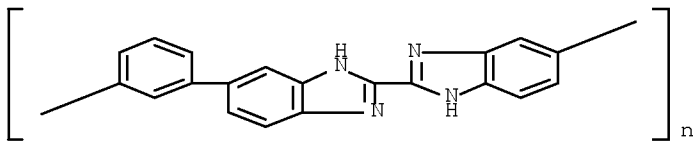
RL: POF (Polymer in formulation); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(blends; hydrogen separation and purification in membranes of miscible polymer

blends with interpenetration networks)

RN 27027-46-9 CAPLUS

CN Poly([2,2'-bi-1H-benzimidazole]-5,5'-diyl-1,3-phenylene) (CA INDEX NAME)



REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2007:173586 CAPLUS Full-text
 DOCUMENT NUMBER: 146:229351

TITLE: Preparation of nitrogenous heterocyclic derivatives as organic electroluminescent materials
 INVENTOR(S): Hosokawa, Chishio; Yamamoto, Hiroshi; Arakane, Takashi
 PATENT ASSIGNEE(S): Idemitsu Kosan Co., Ltd., Japan
 SOURCE: PCT Int. Appl., 64pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007018007	A1	20070215	WO 2006-JP313596	20060707
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
JP 2007039406	A	20070215	JP 2005-227615	20050805
KR 2008031931	A	20080411	KR 2008-702663	20080131
CN 101233116	A	20080730	CN 2006-80028352	20080201
US 20080284322	A1	20081120	US 2008-997916	20080205
PRIORITY APPLN. INFO.:			JP 2005-227615	A 20050805
			WO 2006-JP313596	W 20060707
OTHER SOURCE(S):		MARPAT 146:229351		
GI				

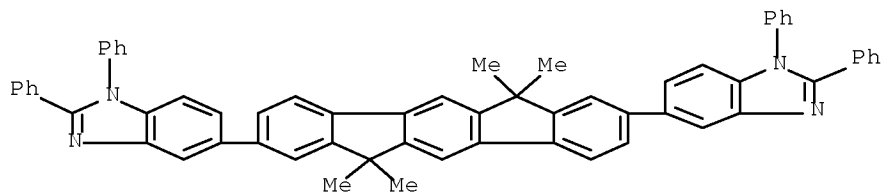
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Title compds. I or II [R1-R10 and A1 = H, (un)substituted aryl, (un)substituted alkyl, etc.; n = 3-6; m = 2-5; x = 0-3; each HAR1-HAR3 is a monovalent group formed by abstracting one of R1a-R6a from Q1; R1a-R6a = H, (un)substituted aryl, (un)substituted alkyl, etc.] were prepared For example, bromination of 6,12-dihydro-6,6,12,12-tetramethylindeno[1,2- b]fluorene, e.g., prepared from 2,5-dibromoterephthalic acid di-Me ester in 4 steps, followed by reaction with triisopropyl borate and Pd(PPh3)4 catalyzed coupling reaction with 2-(4-bromophenyl)-1-phenylbenzimidazole afforded compound III. The exemplified compound was tested for elec. conduction, showed blue electroluminescence with the brightness of 500 cd/m2 at 6.5 V.

IT 924895-28-3P
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (preparation of nitrogenous heterocyclic derivs. as organic electroluminescence materials)

RN 924895-28-3 CAPLUS

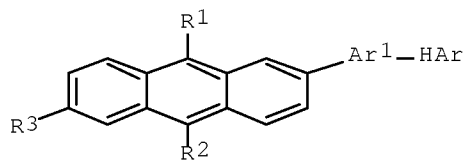
CN 1H-Benzimidazole, 5,5'-(6,12-dihydro-6,6,12,12-tetramethylindeno[1,2-b]fluorene-2,8-diyl)bis[1,2-diphenyl- (CA INDEX NAME)



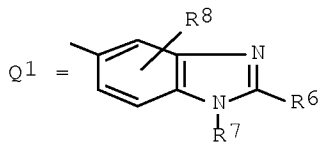
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2005:1126669 CAPLUS Full-text
 DOCUMENT NUMBER: 143:405909
 TITLE: Preparation of benzimidazole derivatives for use in organic electroluminescent elements
 INVENTOR(S): Kawamura, Masahiro; Yamamoto, Hiroshi; Hosokawa, Chishio
 PATENT ASSIGNEE(S): Idemitsu Kosan Co., Ltd., Japan
 SOURCE: PCT Int. Appl., 95 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005097756	A1	20051020	WO 2005-JP6605	20050404
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1734038	A1	20061220	EP 2005-728853	20050404
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR				
US 20070200490	A1	20070830	US 2005-594323	20050927
KR 2007023676	A	20070228	KR 2006-720721	20061002
IN 2006CN03702	A	20070615	IN 2006-CN3702	20061006
CN 101384560	A	20090311	CN 2005-80018269	20061204
PRIORITY APPLN. INFO.:			JP 2004-112799	A 20040407
			WO 2005-JP6605	W 20050404
OTHER SOURCE(S):			MARPAT 143:405909	
GI				



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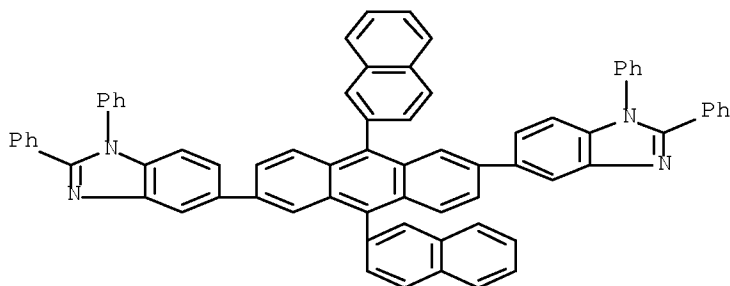


AB The title compds., e.g. I [R1 - R3 = substituent; Ar1 = single bond, divalent connecting group; HAr = Q1, etc.; R6 - R8 = substituent] are prepared Thus, 1,2-diphenyl-5-[4-(9,10-diphenylanthracen-2-yl)phenyl]-1H- benzimidazole was prepared in a multistep process from 2-aminoanthraquinone. The high luminescent efficiency of organic electroluminescent elements containing compds. of this invention was demonstrated.

IT 867044-23-3P
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (preparation of benzimidazole derivs. for use in organic electroluminescent elements)

RN 867044-23-3 CAPLUS

CN 1H-Benzimidazole, 5,5'-(9,10-di-2-naphthalenyl-2,6-anthracenediyl)bis[1,2-diphenyl- (CA INDEX NAME)



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2005:1125867 CAPLUS Full-text

DOCUMENT NUMBER: 143:376232

TITLE: Organic electroluminescent devices with long service life and novel anthracene compounds therefor

INVENTOR(S): Inoue, Koji; Aoki, Yoji; Kagayama, Akifumi; Tamatani, Hiroaki; Totani, Yoshiyuki

PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 77 pp.
 CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005289921	A	20051020	JP 2004-108826	20040401
PRIORITY APPLN. INFO.:			JP 2004-108826	20040401

OTHER SOURCE(S): MARPAT 143:376232

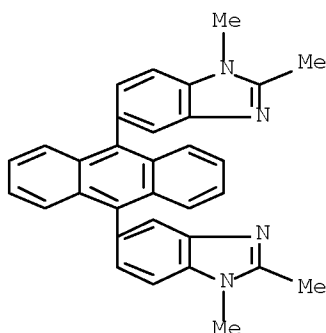
AB The anthracene compds. are substituted by Y1-Y10 [Y1-Y10 = H, halo, cyano, nitro, amino, ester, etc., essentially including Q (X = O, S, or NR; R, R1, R2 = H, halo, cyano, nitro, amino, etc.)]. Organic LED containing the compds. in emission layers or in hole-injecting/transporting layers are further claimed.

IT ~~866332-13-0P~~ ~~866332-14-1P~~

RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (long-life organic LED containing benzoxazolyl-substituted anthracene compds.)

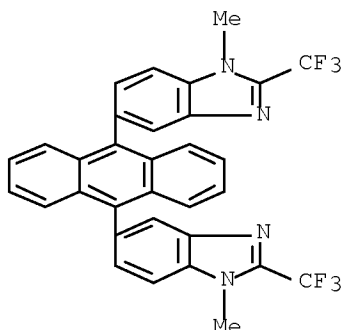
RN 866332-13-0 CAPLUS

CN 1H-Benzimidazole, 5,5'-(9,10-anthracenediyl)bis[1,2-dimethyl- (CA INDEX NAME)



RN 866332-14-1 CAPLUS

CN 1H-Benzimidazole, 5,5'-(9,10-anthracenediyl)bis[1-methyl-2-(trifluoromethyl)- (CA INDEX NAME)



DOCUMENT NUMBER: 129:129876
 ORIGINAL REFERENCE NO.: 129:26425a,26428a
 TITLE: Comparison of the conduction properties of phosphoric acid doped and benzyl sulfonate grafted polybenzimidazole
 AUTHOR(S): Glipa, X.; Mula, B.; Jones, D. J.; Roziere, J.
 CORPORATE SOURCE: Laboratoire des Agregats Moleculaires et Materiaux Inorganiques, Universite Montpellier II, Montpellier, 34095, Fr.
 SOURCE: Special Publication - Royal Society of Chemistry (1998), 217(Chemistry, Energy and the Environment), 249-256
 CODEN: SROCDO; ISSN: 0260-6291
 PUBLISHER: Royal Society of Chemistry
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB Poly(benzimidazole) can be modified by grafting a sulfonated aromatic group without deleterious effect on its thermal stability. The degree of sulfonation strongly influences the water uptake and textural properties and the conductivity of the functionalized polymer. PBI with 75% of available sites sulfonated has a conductivity very close to that of Nafion 117 measured under the same conditions, 10-2Scm-1 at 25°. In a similar fashion, the conductivity of phosphoric acid doped PBI depends on the amount of H3PO4 complexed by the PBI base, which is also accompanied by an increase in the number of water mols. associated with each polymer repeating unit. The highest conductivity observed was lower than that of benzyisulfonate-grafted PBI, even under conditions when the latter might be expected to be H3PO4-doped, viz., resistance measurements in phosphoric acid solns. However, PBI-phosphoric acid blends distinctly display 2 kinds of behavior, reflecting a swollen and highly conducting and a non-swollen and less conducting state.

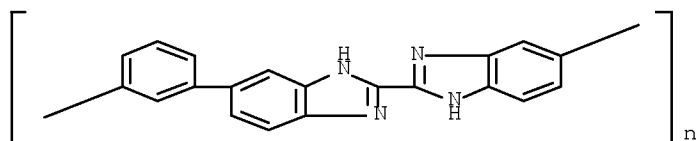
IT ~~27027-46-9~~

RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(comparison of conduction properties of phosphoric acid- doped and benzyisulfonate- grafted polybenzimidazole)

RN 27027-46-9 CAPLUS

CN Poly([2,2'-bi-1H-benzimidazole]-5,5'-diyl-1,3-phenylene) (CA INDEX NAME)



REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1983:35051 CAPLUS Full-text

DOCUMENT NUMBER: 98:35051

ORIGINAL REFERENCE NO.: 98:5495a,5498a

TITLE: Preparation and properties of polybenzimidazoles containing cardo groups

AUTHOR(S): Srinivasan, P. R.; Mahadevan, V.; Srinivasan, M.

CORPORATE SOURCE: Dep. Chem., Indian Inst. Technol., Madras, 600 036, India

SOURCE: Journal of Polymer Science, Polymer Chemistry Edition
(1982), 20(11), 3095-105
CODEN: JPLCAT; ISSN: 0360-6376
DOCUMENT TYPE: Journal
LANGUAGE: English

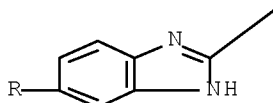
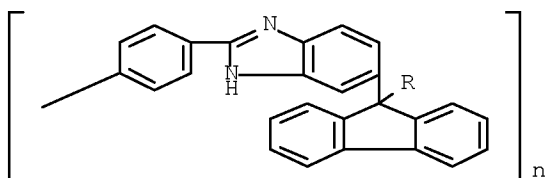
AB Polybenzimidazoles containing cardo groups were prepared from 9,9-bis(4-carboxyphenyl)fluorene (I) [54941-51-4] and 9,9-bis(3,4-diaminophenyl)fluorene [84184-85-0] or 9,9-bis(3,4-diaminophenyl)10-anthrone [84184-89-4]; I was condensed with aromatic tetramines and the cardotetramines were condensed with aromatic dicarboxylic acids. The model compds. 9,9-bis[4-benzimidazol-2-ylphenyl]fluorene [84184-90-7] and 5,5'-(9-fluorenylidene)bis(2-phenylbenzimidazole) [84184-91-8] were prepared and characterized by spectrometry. The polymers were obtained in 60-70 % yield with reduced viscosity 0.7-1.1 dL/g. They were soluble in DMF and chlorinated solvents, e.g. C₂H₂Cl₄. The thermal stability of the cardo polymers was higher than that of noncardo polybenzimidazoles.

IT 84073-26-7P 84073-27-8P 84073-28-9P
84073-29-0P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and properties of)

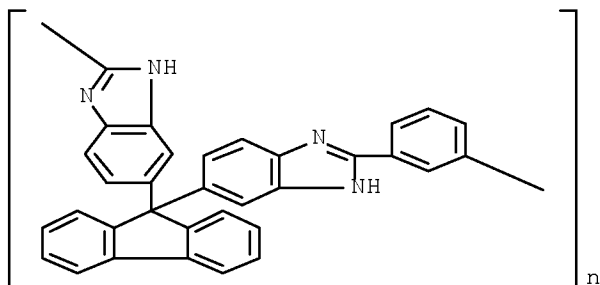
RN 84073-26-7 CAPLUS

CN Poly(1H-benzimidazole-2,5-diyl-9H-fluoren-9-ylidene-1H-benzimidazole-5,2-diyl-1,4-phenylene) (9CI) (CA INDEX NAME)

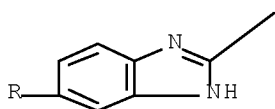
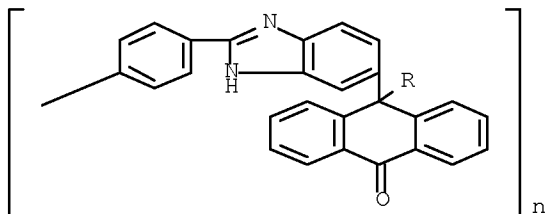


RN 84073-27-8 CAPLUS

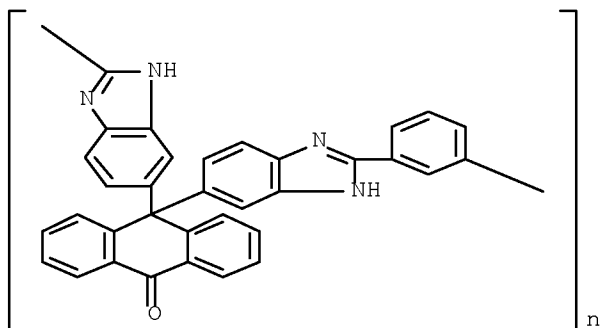
CN Poly(1H-benzimidazole-2,5-diyl-9H-fluoren-9-ylidene-1H-benzimidazole-5,2-diyl-1,3-phenylene) (9CI) (CA INDEX NAME)



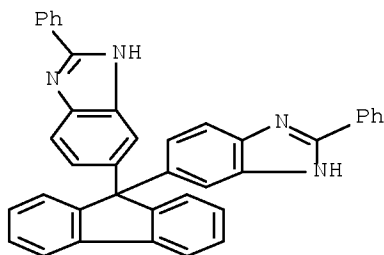
RN 84073-28-9 CAPLUS
 CN Poly[1H-benzimidazole-2,5-diyl(10-oxo-9(10H)-anthracenylidene)-1H-benzimidazole-5,2-diyl-1,4-phenylene] (9CI) (CA INDEX NAME)



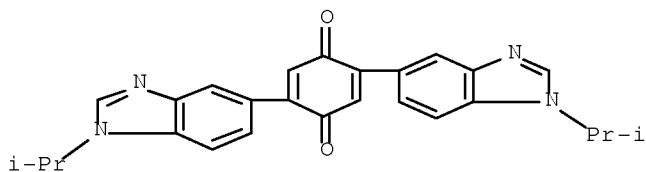
RN 84073-29-0 CAPLUS
 CN Poly[1H-benzimidazole-2,5-diyl(10-oxo-9(10H)-anthracenylidene)-1H-benzimidazole-5,2-diyl-1,3-phenylene] (9CI) (CA INDEX NAME)



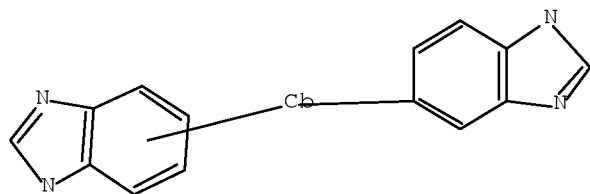
IT 84184-91-8P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 84184-91-8 CAPLUS
 CN 1H-Benzimidazole, 5,5'-(9H-fluoren-9-ylidene)bis[2-phenyl- (9CI) (CA INDEX NAME)



L4 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1975:43254 CAPLUS Full-text
 DOCUMENT NUMBER: 82:43254
 ORIGINAL REFERENCE NO.: 82:6885a,6888a
 TITLE: Benzimidazole derivatives. XXXIII. 1,4-Benzoquinolyl
 derivatives of azoles
 AUTHOR(S): Komissarov, V. N.; Simonov, A. M.
 CORPORATE SOURCE: Rostov. Gos. Univ., Rostov-on-Don, USSR
 SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1974), (10),
 1402-4
 CODEN: KGSSAQ; ISSN: 0132-6244
 DOCUMENT TYPE: Journal
 LANGUAGE: Russian
 GI For diagram(s), see printed CA Issue.
 AB The benzoquinones I [R = H, Ph; R1 = 1-methyl-5-benzimidazolyl, 1-isopropyl-5-benzimidazolyl, 6-benzothiazolyl, 4-(2-benzimidazolyl)-phenyl, 4-(2-benzoxazolyl)phenyl] were prepared in 27-46% yield by Meerwein reaction of the quinone II with R1N2+. Reaction of I (R = H, R1 = 1-isopropyl-5-benzimidazolyl) with R1N2+ gave 34% 2,5-bis(1-isopropyl-5-benzimidazolyl)-p-benzoquinone. Treatment of 1-(2,5-dimethoxyphenyl)-5-nitrobenzimidazole with HBr gave 98% 1-(2,5-dihydroxyphenyl)-5-nitrobenzimidazole which when treated with KBrO3 and H2SO4 gave 1-(p-benzoquinonyl)-5-nitrobenzimidazole.
 IT 54513-36-9P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 54513-36-9 CAPLUS
 CN 2,5-Cyclohexadiene-1,4-dione, 2,5-bis[1-(1-methylethyl)-1H-benzimidazol-5-yl]- (CA INDEX NAME)



=> d 11
 L1 HAS NO ANSWERS
 L1 STR



G1 Cb,Hy,Ak

Structure attributes must be viewed using STN Express query preparation.

=> d hist

(FILE 'HOME' ENTERED AT 15:13:52 ON 20 JUL 2009)

FILE 'REGISTRY' ENTERED AT 15:14:28 ON 20 JUL 2009

L1 STRUCTURE UPLOADED

L2 0 S L1

L3 12 S L1 FULL

FILE 'CAPLUS' ENTERED AT 15:15:13 ON 20 JUL 2009

L4 8 S L3

=>

---Logging off of STN---

=>

Executing the logoff script...

Uploading C:\Program Files\STNEXP\Queries\10594323a.str

Hy ——— Cb ——— Hy 1 ——— 3 ——— 2

chain nodes :

1 2 3

chain bonds :

1-3 2-3

exact/norm bonds :

1-3 2-3

Match level :

1:Atom 2:Atom 3:Atom

Generic attributes :

1:

Saturation : Unsaturated

2:

Saturation : Unsaturated

3:

Saturation : Unsaturated

Number of Carbon Atoms : 7 or more
Type of Ring System : Polycyclic

Element Count :
Node 3: Limited
C,C14

L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 10:26:08 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 2408683 TO ITERATE

0.1% PROCESSED 2000 ITERATIONS 0 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **INCOMPLETE**
BATCH **INCOMPLETE**

PROJECTED ITERATIONS: 48103779 TO 48243541

PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> e anthracene/cn

E1	1	ANTHRACENAMINIUM, N,N,N-TRIMETHYL-, CHLORIDE/CN
E2	1	ANTHRACENAMINIUM, N,N-DIETHYL-N-((PHOSPHONOOXY)METHYL)-, INN ER SALT/CN
E3	1 -->	ANTHRACENE/CN
E4	1	ANTHRACENE 1,2-DIOXYGENASE/CN
E5	1	ANTHRACENE 1,3,5-TRINITROBENZENE/CN
E6	1	ANTHRACENE 9,10-ENDOPEROXIDE/CN
E7	1	ANTHRACENE 9-CARBONYL-B-ALANYLLYSYLALANINE P-NITROBENZY L ESTER HYDROBROMIDE/CN
E8	1	ANTHRACENE 9-CARBONYL-B-ALANYLLYSYLLYSYL-2-NAPHTHYLMETH YLAMIDE/CN
E9	1	ANTHRACENE 9-CARBONYL-B-ALANYLLYSYLLYSYLLYSYLLYSYL-2-NA PHTHYLMETHYLAMIDE/CN
E10	1	ANTHRACENE ACID BLACK DSF/CN
E11	1	ANTHRACENE ACID BROWN RH/CN
E12	1	ANTHRACENE ANION/CN

=> s e3

L3 1 ANTHRACENE/CN

=> d rsd

L3 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2009 ACS on STN

Ring System Data

Elemental Analysis EA	Elemental Sequence ES	Size of the Rings SZ	Ring System Formula RF	Ring Identifier RID	RID Occurrence Count
C6-C6-C6	C6-C6-C6	6-6-6	C14	2508.17.56	1

=> d 13

L3 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2009 ACS on STN

RN 120-12-7 REGISTRY

ED Entered STN: 16 Nov 1984

CN Anthracene (CA INDEX NAME)

OTHER NAMES:

CN Anthracin

CN Green Oil

CN NSC 7958

CN Paranaphthalene

CN Tetra Olive N2G

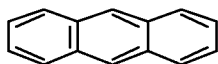
MF C14 H10

CI COM, RPS

LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, PIRA, PROMT, PS, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, TULSA, ULIDAT, USPAT2, USPATFULL
(*File contains numerically searchable property data)

Other Sources: DSL**, EINECS**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

31400 REFERENCES IN FILE CA (1907 TO DATE)

1290 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

31465 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> s 2508.17/rid

L4 148436 2508.17/RID

=> s l1 subset=L4 sam
SAMPLE SUBSET SEARCH INITIATED 10:30:13 FILE 'REGISTRY'
SAMPLE SUBSET SCREEN SEARCH COMPLETED - 7411 TO ITERATE

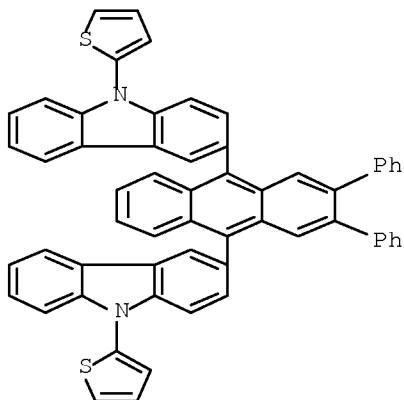
27.0% PROCESSED 2000 ITERATIONS 46 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

PROJECTIONS (WITHIN SPECIFIED SUBSET): ONLINE **COMPLETE**
PROJECTED ITERATIONS (WITHIN SPECIFIED SUBSET): 143059 TO 153381
PROJECTED ANSWERS (WITHIN SPECIFIED SUBSET): 2626 TO 4192

L5 46 SEA SUB=L4 SSS SAM L1

=> d scan

L5 46 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
IN INDEX NAME NOT YET ASSIGNED
MF C58 H36 N2 S2



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

=> s 2508.17/rid and 4-8/N
148436 2508.17/RID
12819187 4-8/N
L6 25730 2508.17/RID AND 4-8/N

=> s l1 subset=L6 sam
SAMPLE SUBSET SEARCH INITIATED 10:35:15 FILE 'REGISTRY'
SAMPLE SUBSET SCREEN SEARCH COMPLETED - 1255 TO ITERATE

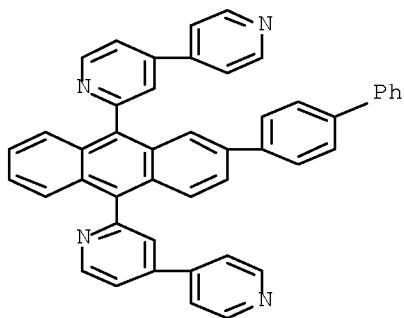
100.0% PROCESSED 1255 ITERATIONS 39 ANSWERS
SEARCH TIME: 00.00.01

PROJECTIONS (WITHIN SPECIFIED SUBSET): ONLINE **COMPLETE**
 PROJECTED ITERATIONS (WITHIN SPECIFIED SUBSET): 22975 TO 27225
 PROJECTED ANSWERS (WITHIN SPECIFIED SUBSET): 406 TO 1154

L7 39 SEA SUB=L6 SSS SAM L1

=> d scan

L7 39 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
 IN 4,4'-Bipyridine, 2,2''-(2-[1,1'-biphenyl]-4-yl-9,10-anthracenediyl)bis-
 MF C46 H30 N4



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

=> e benzimidazole/cn

E1	1	BENZIMIDAZOL-4-YLAMINE/CN
E2	1	BENZIMIDAZOL-5,6-N-BENZYLSUCCINIMIDE/CN
E3	1 -->	BENZIMIDAZOLE/CN
E4	1	BENZIMIDAZOLE 1-METHYL-2-(METHYLSULFONYL)-/CN
E5	1	BENZIMIDAZOLE 5-P-NITROBENZAMIDO-1-PHENYL-/CN
E6	1	BENZIMIDAZOLE ANION/CN
E7	1	BENZIMIDAZOLE CATION RADICAL/CN
E8	1	BENZIMIDAZOLE HYDROCHLORIDE/CN
E9	1	BENZIMIDAZOLE NITRATE/CN
E10	1	BENZIMIDAZOLE PHOSPHATE/CN
E11	1	BENZIMIDAZOLE RADICAL CATION/CN
E12	1	BENZIMIDAZOLE RIBOFURANOSIDE/CN

=> s e3

L8 1 BENZIMIDAZOLE/CN

=> d rsd

L8 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2009 ACS on STN

Ring System Data

Elemental	Elemental	Size of	Ring System	Ring	RID
Analysis	Sequence	the Rings	Formula	Identifier	Occurrence

EA	ES	SZ	RF	RID	Count
C3N2-C6	NCNC2-C6	5-6	C7N2	333.401.37	1

```
=> s 2508.17/rid and 333.401/rid
      148436 2508.17/RID
      598192 333.401/RID
L9      1101 2508.17/RID AND 333.401/RID
```

```
=> s l1 subset=l9 sam
SAMPLE SUBSET SEARCH INITIATED 10:39:08 FILE 'REGISTRY'
SAMPLE SUBSET SCREEN SEARCH COMPLETED -      64 TO ITERATE
```

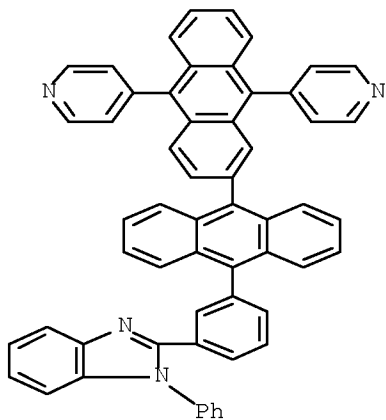
```
100.0% PROCESSED      64 ITERATIONS      5 ANSWERS
SEARCH TIME: 00.00.01
```

```
PROJECTIONS (WITHIN SPECIFIED SUBSET):      ONLINE  **COMPLETE**
PROJECTED ITERATIONS (WITHIN SPECIFIED SUBSET):      800 TO      1760
PROJECTED ANSWERS (WITHIN SPECIFIED SUBSET):      5 TO      234
```

```
L10      5 SEA SUB=L9 SSS SAM L1
```

```
=> d scan
```

```
L10  5 ANSWERS  REGISTRY  COPYRIGHT 2009 ACS on STN
IN   1H-Benzimidazole, 2-[3-(9,10-di-4-pyridinyl[2,9'-bianthracen]-10'-
      yl)phenyl]-1-phenyl-
MF   C57 H36 N4
```



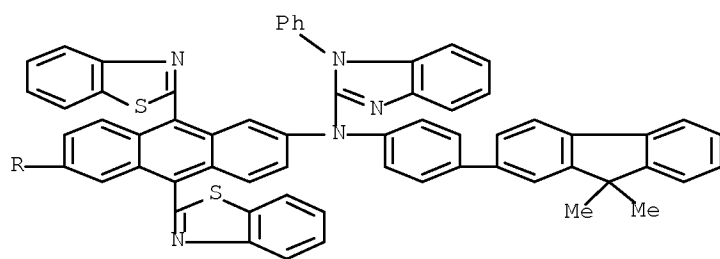
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**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**
```

```
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):4
```

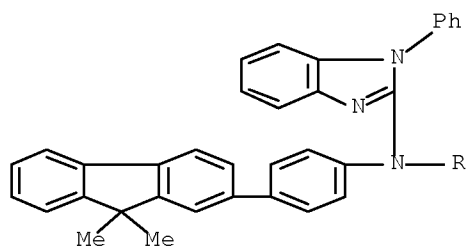
```
L10  5 ANSWERS  REGISTRY  COPYRIGHT 2009 ACS on STN
IN   2,6-Anthracenediamine, 9,10-bis(2-benzothiazolyl)-N2,N6-bis[4-(9,9-
```

dimethyl-9H-fluoren-2-yl)phenyl]-N2,N6-bis(1-phenyl-1H-benzimidazol-2-yl)-
 MF C96 H66 N8 S2

PAGE 1-A



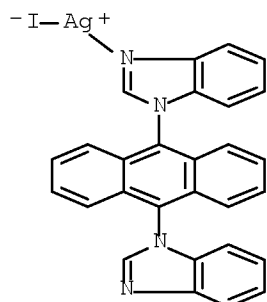
PAGE 2-A



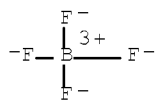
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L10 5 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
 IN Silver, [1-[10-(1H-benzimidazol-1-yl)-9-anthracenyl]-1H-benzimidazole-
 κN3]iodo-, tetrafluoroborate(1-) (1:1)
 MF C28 H18 Ag I N4 . B F4
 CI COM

CM 1

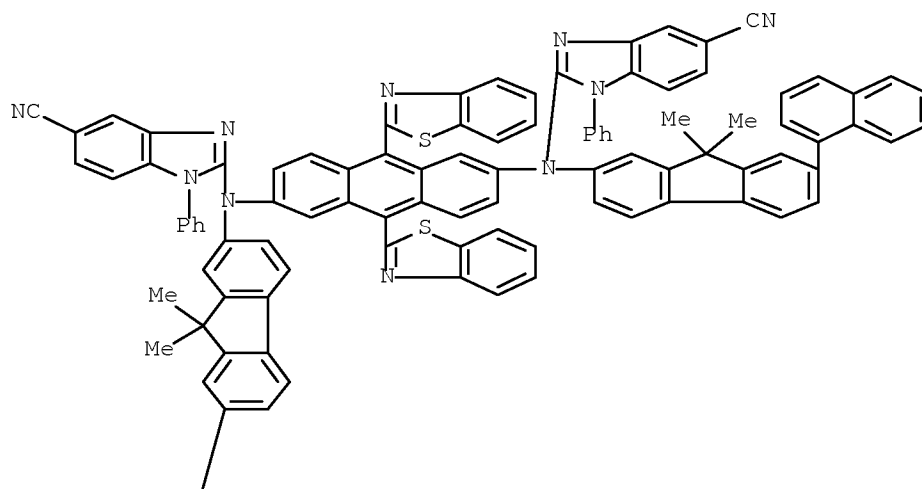


CM 2

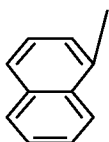


L10 5 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
IN INDEX NAME NOT YET ASSIGNED
MF C106 H68 N10 S2

PAGE 1-A

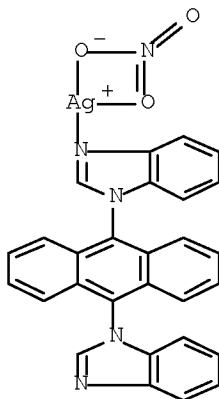


PAGE 2-A

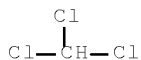


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L10 5 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
 IN Silver, [1-[10-(1H-benzimidazol-1-yl)-9-anthracenyl]-1H-benzimidazole-
 κN3](nitrate-κO,κO')-, compd. with trichloromethane
 (1:2)
 MF C28 H18 Ag N5 O3 . 2 C H Cl3
 CM 1



CM 2



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

=> s l1 subset=19 ful
 FULL SUBSET SEARCH INITIATED 10:40:52 FILE 'REGISTRY'
 FULL SUBSET SCREEN SEARCH COMPLETED - 1101 TO ITERATE

100.0% PROCESSED 1101 ITERATIONS 53 ANSWERS
 SEARCH TIME: 00.00.01

L11 53 SEA SUB=L9 SSS FUL L1

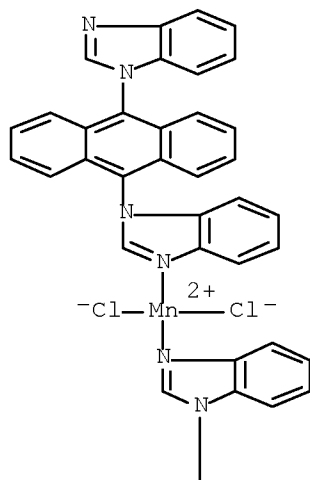
=> s l11 and caplus/lc
 67540627 CAPLUS/LC
 L12 47 L11 AND CAPLUS/LC

=> s l11 not l12
 L13 6 L11 NOT L12

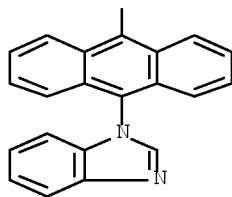
=> d 1-6

L13 ANSWER 1 OF 6 REGISTRY COPYRIGHT 2009 ACS on STN
RN 1029901-16-3 REGISTRY
ED Entered STN: 23 Jun 2008
CN Manganese, bis[1-[10-(1H-benzimidazol-1-yl)-9-anthracenyl]-1H-benzimidazole- κ N3]dichloro-, (SP-4-1)- (CA INDEX NAME)
MF C56 H36 Cl2 Mn N8
CI CCS, COM
SR CA

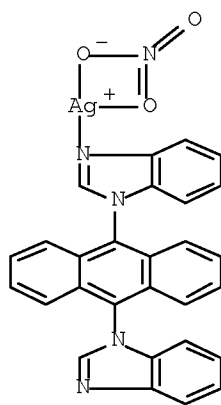
PAGE 1-A



PAGE 2-A



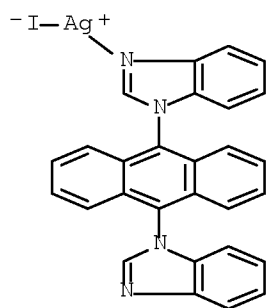
L13 ANSWER 2 OF 6 REGISTRY COPYRIGHT 2009 ACS on STN
RN 1029901-13-0 REGISTRY
ED Entered STN: 23 Jun 2008
CN Silver, [1-[10-(1H-benzimidazol-1-yl)-9-anthracenyl]-1H-benzimidazole- κ N3](nitrate- κ O, κ O')- (CA INDEX NAME)
MF C28 H18 Ag N5 O3
CI CCS, COM
SR CA



L13 ANSWER 3 OF 6 REGISTRY COPYRIGHT 2009 ACS on STN
 RN 1029901-10-7 REGISTRY
 ED Entered STN: 23 Jun 2008
 CN Silver, [1-[10-(1H-benzimidazol-1-yl)-9-anthracenyl]-1H-benzimidazole-
 κN3]iodo-, tetrafluoroborate(1-) (1:1) (CA INDEX NAME)
 MF C28 H18 Ag I N4 . B F4
 CI COM
 SR CA

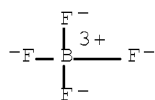
CM 1

CRN 1029901-09-4
 CMF C28 H18 Ag I N4
 CCI CCS

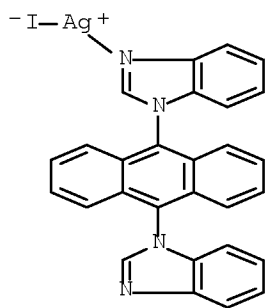


CM 2

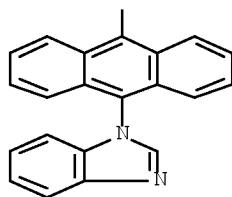
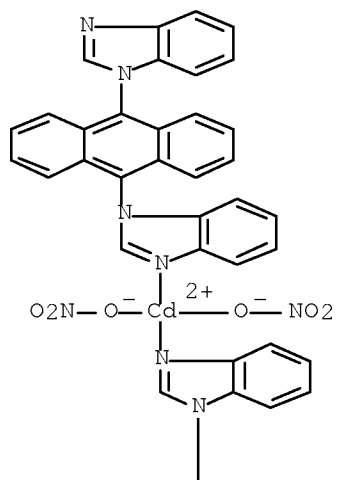
CRN 14874-70-5
 CMF B F4
 CCI CCS



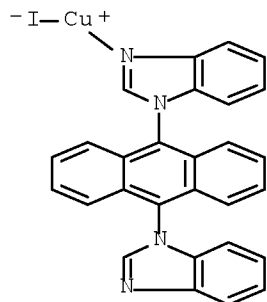
L13 ANSWER 4 OF 6 REGISTRY COPYRIGHT 2009 ACS on STN
 RN 1029901-09-4 REGISTRY
 ED Entered STN: 23 Jun 2008
 CN Silver, [1-[10-(1H-benzimidazol-1-yl)-9-anthracenyl]-1H-benzimidazole-
 κN3]iodo- (CA INDEX NAME)
 MF C28 H18 Ag I N4
 CI CCS, COM
 SR CA



L13 ANSWER 5 OF 6 REGISTRY COPYRIGHT 2009 ACS on STN
 RN 1029901-05-0 REGISTRY
 ED Entered STN: 23 Jun 2008
 CN Cadmium, bis[1-[10-(1H-benzimidazol-1-yl)-9-anthracenyl]-1H-benzimidazole-
 κN3]bis(nitrato-κO)-, (T-4)- (CA INDEX NAME)
 MF C56 H36 Cd N10 O6
 CI CCS, COM
 SR CA



L13 ANSWER 6 OF 6 REGISTRY COPYRIGHT 2009 ACS on STN
 RN 1029901-02-7 REGISTRY
 ED Entered STN: 23 Jun 2008
 CN Copper, [1-[10-(1H-benzimidazol-1-yl)-9-anthracenyl]-1H-benzimidazole-
 κN3]iodo- (CA INDEX NAME)
 MF C28 H18 Cu I N4
 CI CCS, COM
 SR CA



This file contains CAS Registry Numbers for easy and accurate substance identification.

The ALL, BIB, MAX, and STD display formats in the CA/CAPLUS family of databases will soon be updated to include new citing references information. This enhancement may impact record import into database management software. For additional information, refer to NEWS 22.

=> s l11

L14 14 L11

=> d ibib abs hitstr 1-14

L14 ANSWER 1 OF 14 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2009:708353 CAPLUS Full-text

DOCUMENT NUMBER: 151:19803

TITLE: Novel organic electroluminescent compounds and organic electroluminescent device using the same

INVENTOR(S): Lee, Mi Ae; Kim, Chi Sik; Cho, Young Jun; Kwon, Hyuck Joo; Kim, Bong Ok; Kim, Sung Min; Yoon, Seung Soo

PATENT ASSIGNEE(S): Gracel Display Inc., S. Korea

SOURCE: Eur. Pat. Appl., 458pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

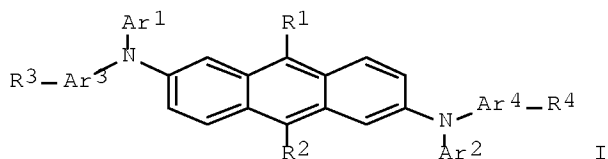
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	---	-----	-----	-----
EP 2067767	A1	20090610	EP 2008-253858	20081202
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LI, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, AL, BA, MK, RS				
KR 2009058063	A	20090609	KR 2007-124677	20071204
PRIORITY APPLN. INFO.:			KR 2007-124677	A 20071204

GI



AB The title organic electroluminescent compds. are described by the general formula I (R1 and R2 = independently selected H, D, C1-60 alkyl, C2-20 alkenyl, C2-20 alkynyl, C3-15 cycloalkyl, triC1-20 alkylsilyl, di(C1-20 alkyl)(C6-20 aryl)silyl, tri(C6-20 aryl)silyl, C7-15 tricycloalkyl, C4-15

bicycloalkyl, C6-60 aryl, or C3-60 heteroaryl, which may be further substituted by ≥ 1 of D, C1-60 alkyl, C1-20 alkenyl, C1-20 alkynyl, halo, cyano, Ph, biphenyl, fluorenyl, naphthyl and anthryl; Ar1 and Ar2 = independently selected C6-60 aryl, C3-60 heteroaryl, morpholino, or thiomorpholino, and any aryl or heteroaryl groups may be further substituted by ≥ 1 of D, C1-60 alkyl with or without halo substituents, C1-20 alkoxy, C3-15 cycloalkyl, halo, cyano, tri(C1-20 alkyl)silyl, di(C1-20 alkyl)(C6-20 aryl)silyl, tri(C6-20 aryl)silyl, Ph, biphenyl, fluorenyl, naphthyl, and anthryl; Ar3 and Ar4 = independently selected C6-20 arylene with or without a C1-20 alkyl substituent; and R3 and R4 = independently selected C1-20 alkyl or C6-20 aryl which may be further substituted by D or C1-20 alkyl, with the restriction that the total number of carbons in R3-Ar3- and R4-Ar4- is 21-60). Organic electroluminescent devices employing the compds. as dopants in combination with selected host materials and organic solar cells employing the compds. are also described.

IT 1159061-83-2 1159061-85-4 1159061-87-6
 1159062-43-7 1159062-45-9 1159062-47-1
 1159063-03-2 1159063-05-4 1159063-07-6
 1159063-63-4 1159063-65-6 1159063-67-8
 1159064-23-9 1159064-25-1 1159064-27-3
 1159065-08-3 1159065-11-8 1159065-14-1
 1159065-98-1 1159066-01-9 1159066-04-2
 1159066-67-7 1159066-69-9 1159066-71-3

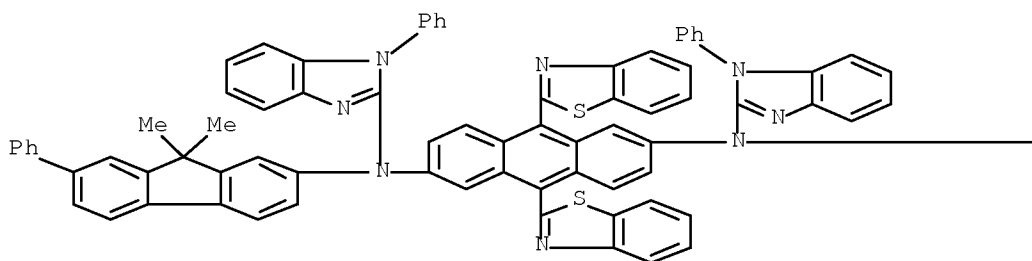
RL: MOA (Modifier or additive use); PRPH (Prophetic); TEM (Technical or engineered material use); USES (Uses)

(electroluminescent anthracene diamine derivs. and organic electroluminescent devices and solar cells using them)

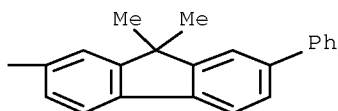
RN 1159061-83-2 CAPLUS

CN 2,6-Anthracenediamine, 9,10-bis(2-benzothiazolyl)-N2,N6-bis(9,9-dimethyl-7-phenyl-9H-fluoren-2-yl)-N2,N6-bis(1-phenyl-1H-benzimidazol-2-yl)- (CA INDEX NAME)

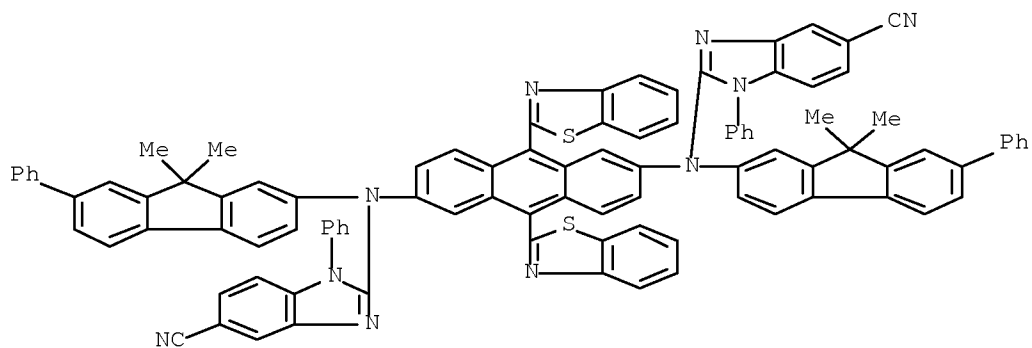
PAGE 1-A



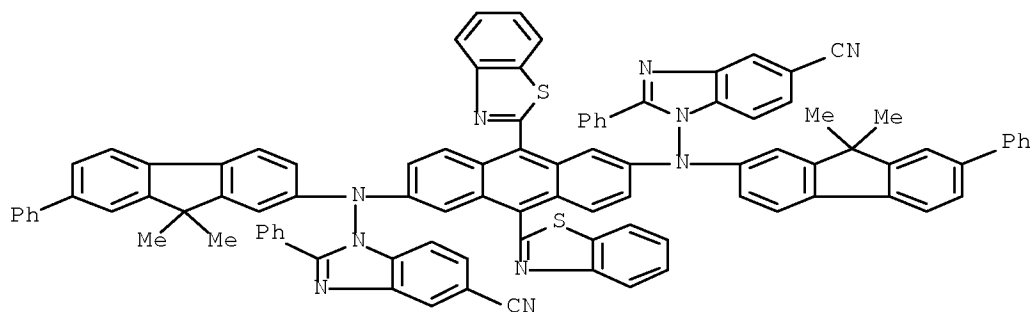
PAGE 1-B



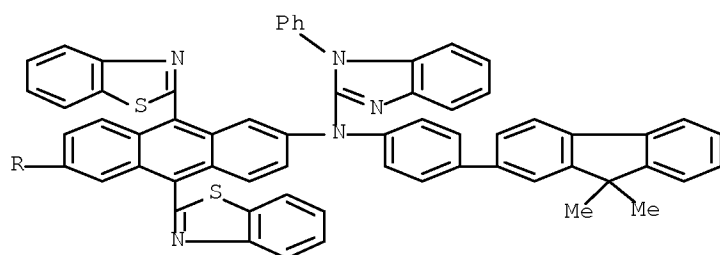
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 CN INDEX NAME NOT YET ASSIGNED

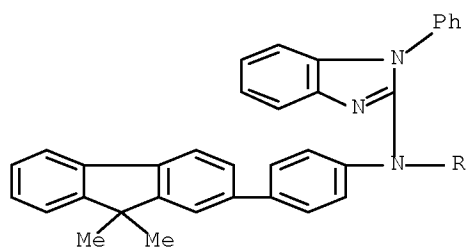


RN 1159061-87-6 CAPLUS
 CN INDEX NAME NOT YET ASSIGNED

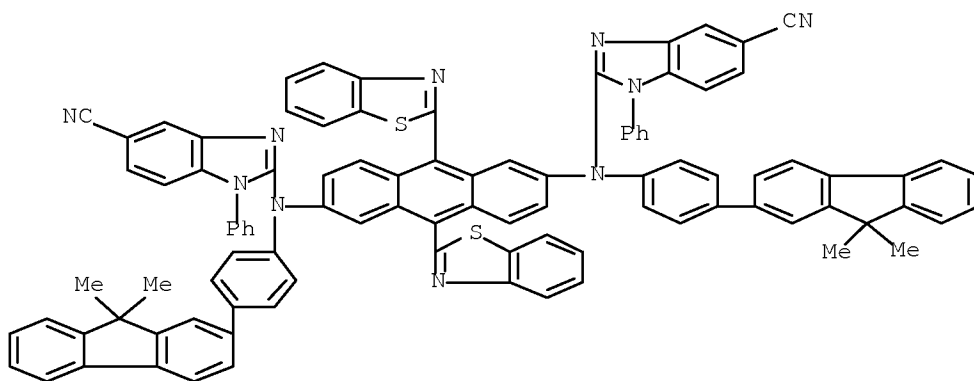


RN 1159062-43-7 CAPLUS
 CN 2,6-Anthracenediamine, 9,10-bis(2-benzothiazolyl)-N2,N6-bis[4-(9,9-dimethyl-9H-fluoren-2-yl)phenyl]-N2,N6-bis(1-phenyl-1H-benzimidazol-2-yl)-
 (CA INDEX NAME)

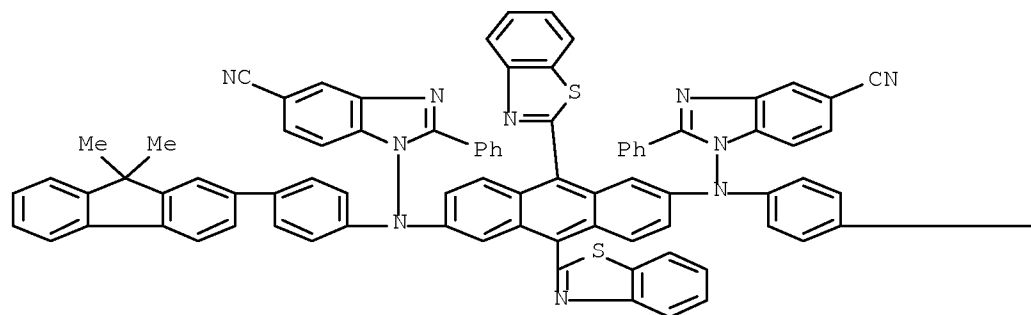


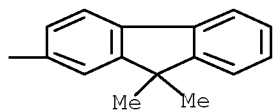


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CN INDEX NAME NOT YET ASSIGNED

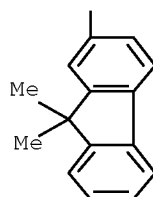
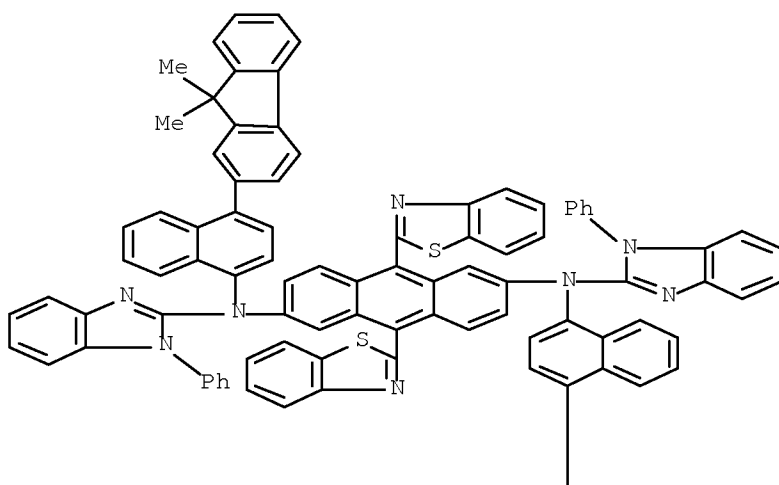


RN 1159062-47-1 CAPLUS
CN INDEX NAME NOT YET ASSIGNED

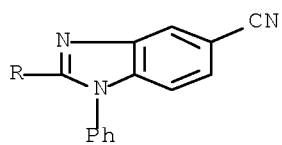
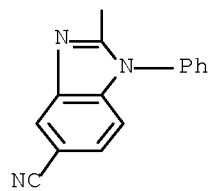
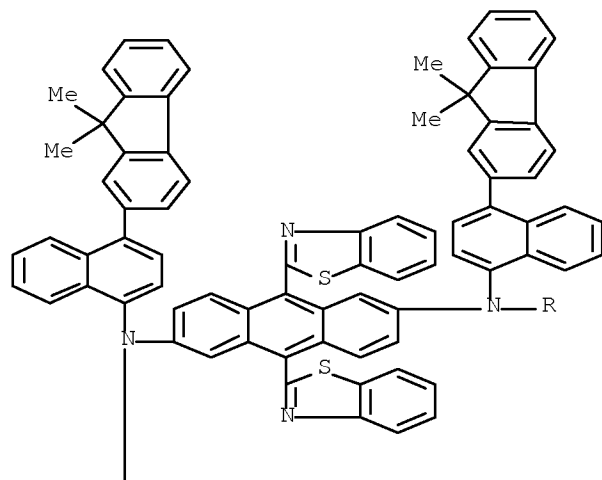




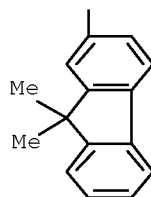
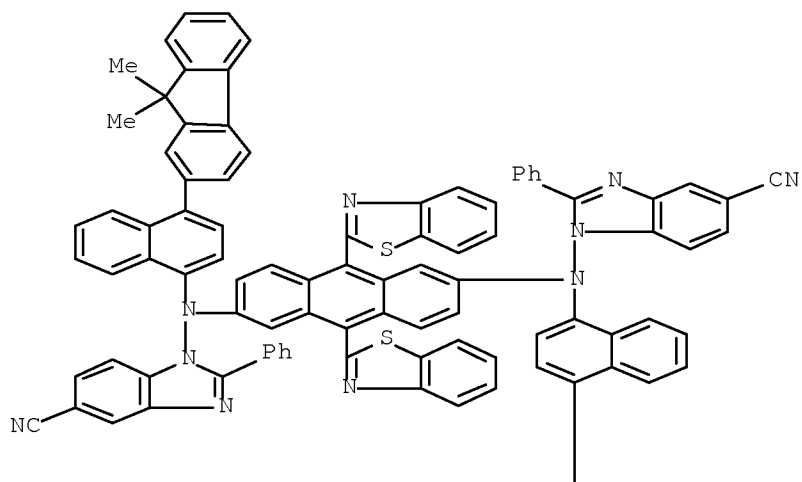
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CN INDEX NAME NOT YET ASSIGNED



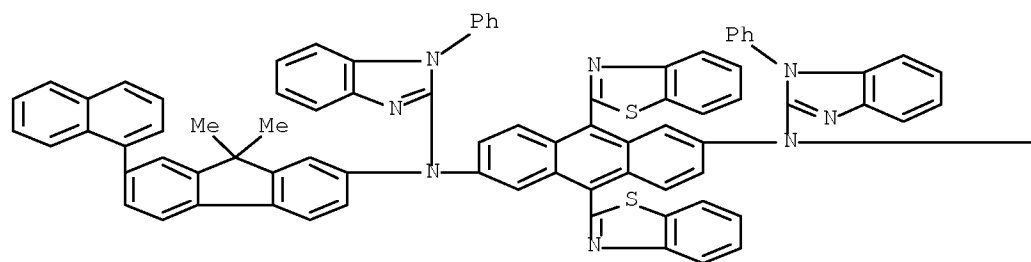
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CN INDEX NAME NOT YET ASSIGNED



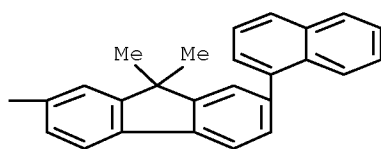
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CN INDEX NAME NOT YET ASSIGNED



RN 1159063-63-4 CAPLUS
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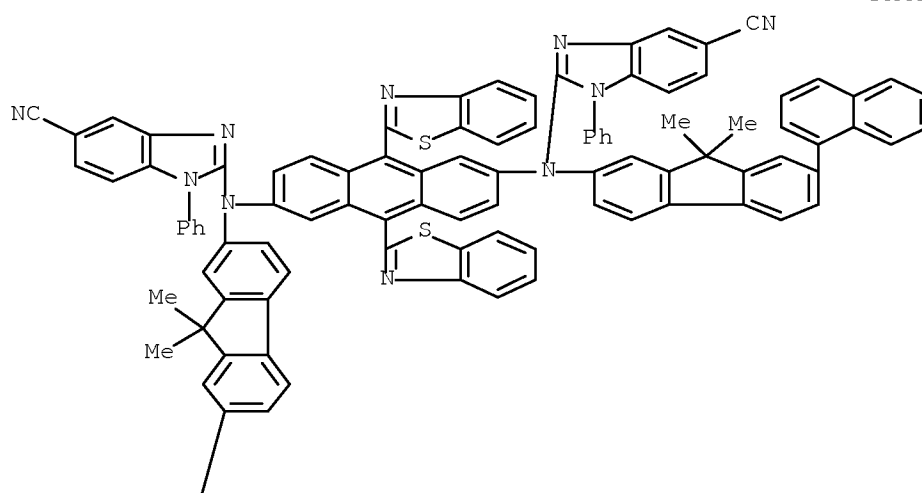


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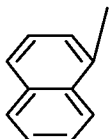


RN 1159063-65-6 CAPLUS
CN INDEX NAME NOT YET ASSIGNED

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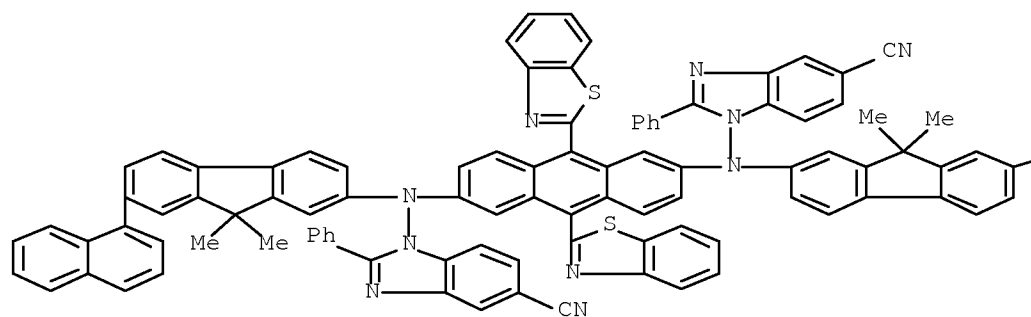


PAGE 2-A

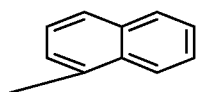


RN 1159063-67-8 CAPLUS
CN INDEX NAME NOT YET ASSIGNED

PAGE 1-A

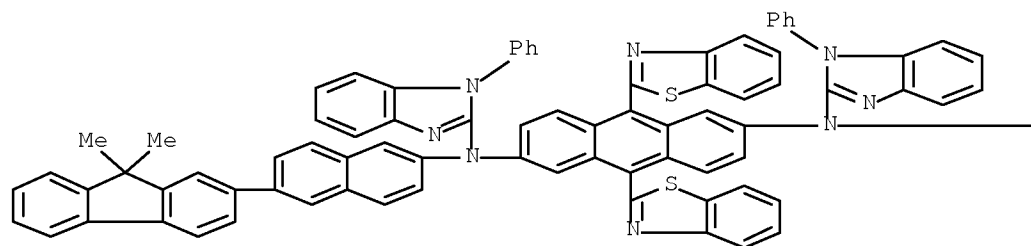


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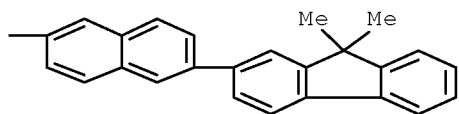


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CN INDEX NAME NOT YET ASSIGNED

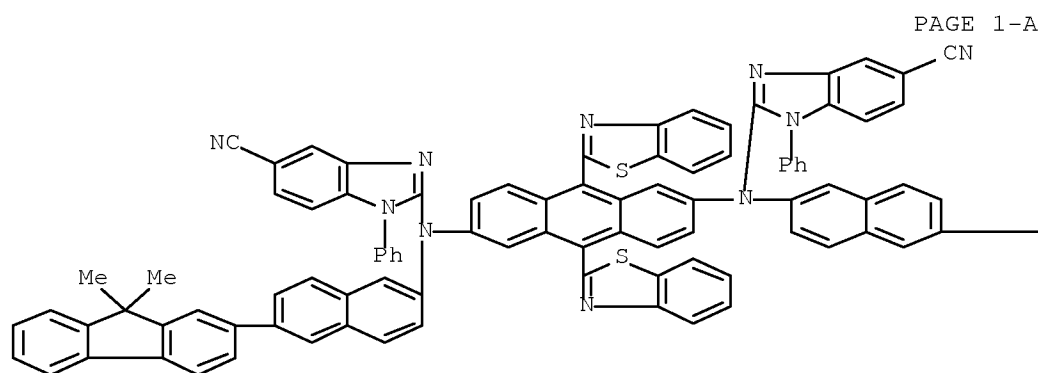
PAGE 1-A



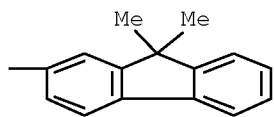
PAGE 1-B



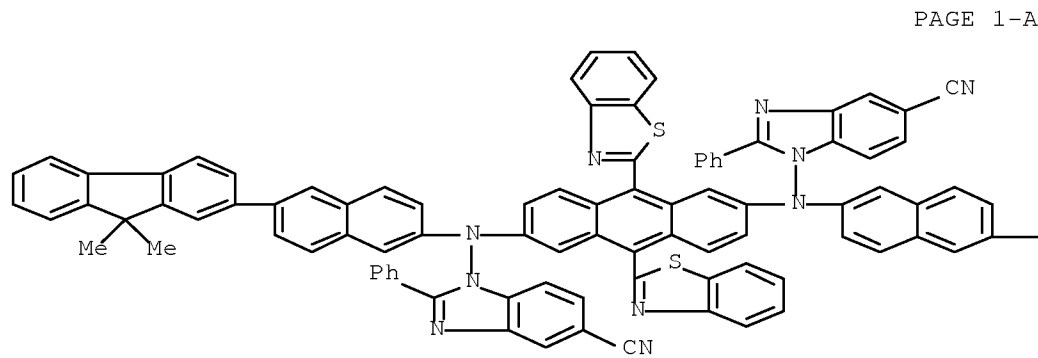
RN 1159064-25-1 CAPLUS
CN INDEX NAME NOT YET ASSIGNED



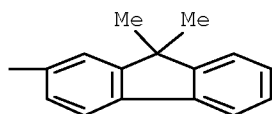
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RN 1159064-27-3 CAPLUS
CN INDEX NAME NOT YET ASSIGNED

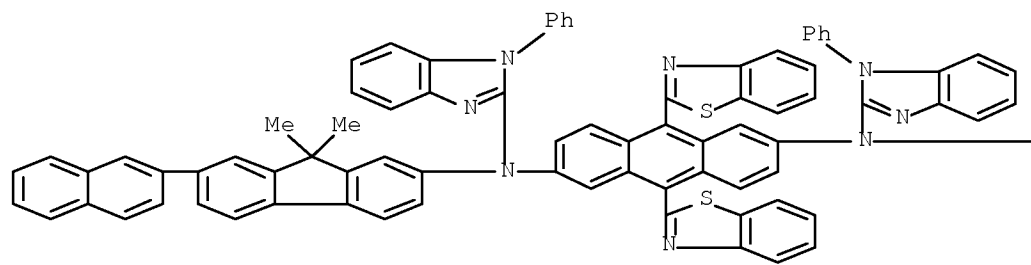


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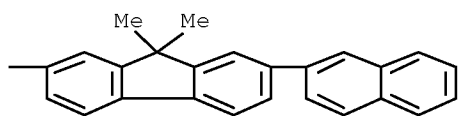


RN 1159065-08-3 CAPLUS
CN INDEX NAME NOT YET ASSIGNED

PAGE 1-A

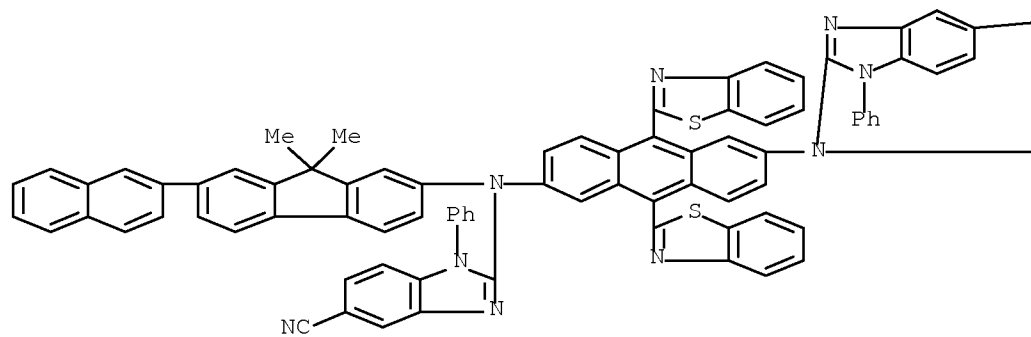


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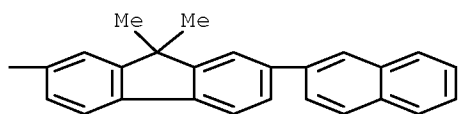
RN 1159065-11-8 CAPLUS
CN INDEX NAME NOT YET ASSIGNED

PAGE 1-A



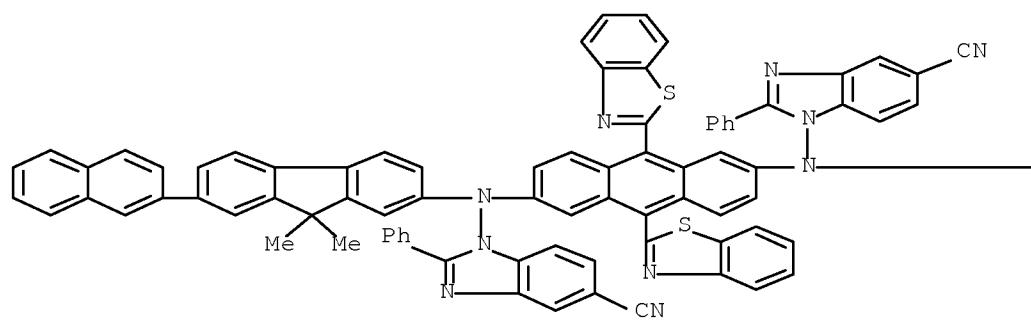
PAGE 1-B

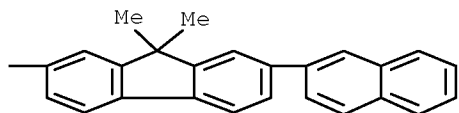
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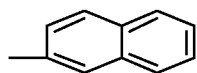
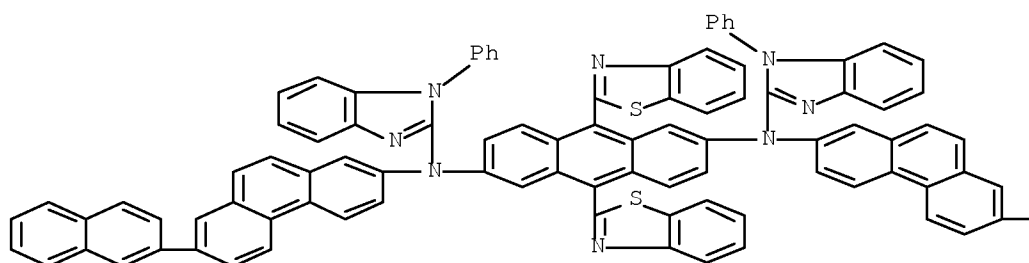
RN 1159065-14-1 CAPLUS
CN INDEX NAME NOT YET ASSIGNED

PAGE 1-A



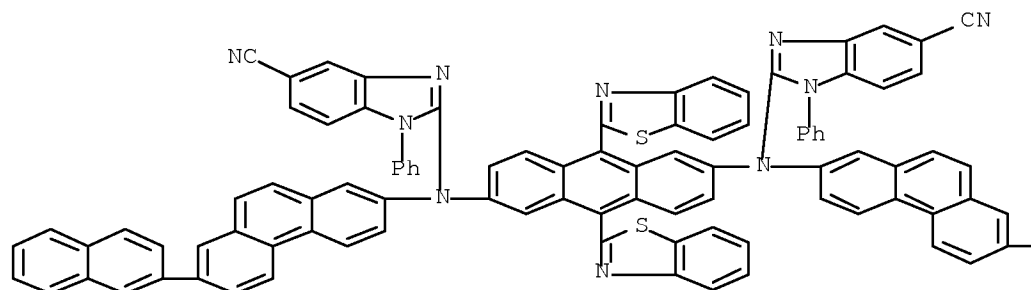


RN 1159065-98-1 CAPLUS
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 (CA INDEX NAME)

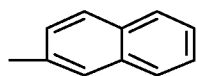


RN 1159066-01-9 CAPLUS
 CN INDEX NAME NOT YET ASSIGNED

PAGE 1-A

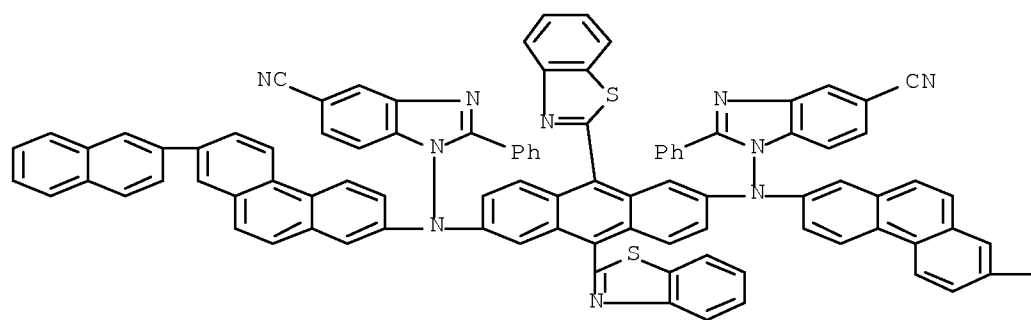


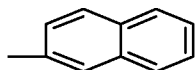
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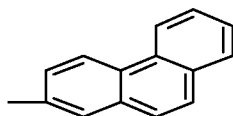
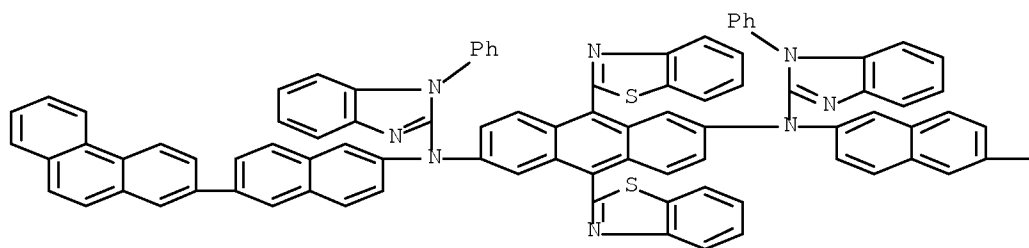
RN 1159066-04-2 CAPLUS
CN INDEX NAME NOT YET ASSIGNED

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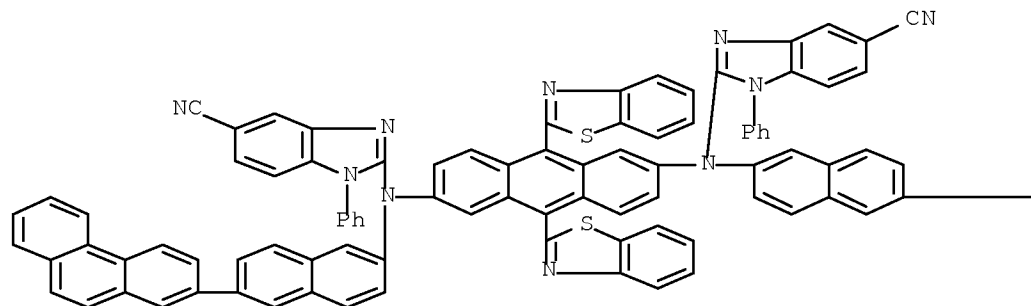


RN 1159066-67-7 CAPLUS
 CN 2,6-Anthracenediamine, 9,10-bis(2-benzothiazolyl)-N2,N6-bis[6-(2-phenanthrenyl)-2-naphthalenyl]-N2,N6-bis(1-phenyl-1H-benzimidazol-2-yl)-
 (CA INDEX NAME)

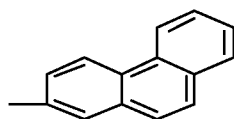


RN 1159066-69-9 CAPLUS
 CN INDEX NAME NOT YET ASSIGNED

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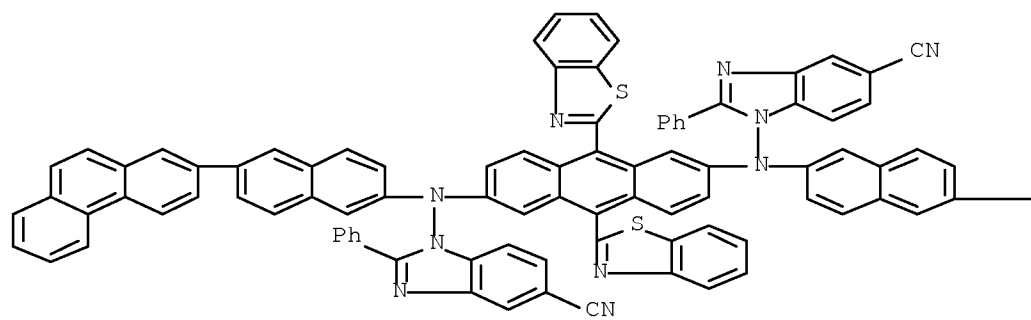


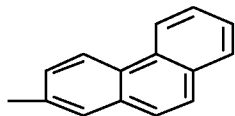
PAGE 1-B



RN 1159066-71-3 CAPLUS
CN INDEX NAME NOT YET ASSIGNED

PAGE 1-A





REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 2 OF 14 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2007:993658 CAPLUS Full-text
 DOCUMENT NUMBER: 147:354622
 TITLE: Anthracene derivatives for electron transport layers in organic electronic devices such as LEDs
 INVENTOR(S): Bae, Jae-Soon; Lee, Dae-Woong; Lee, Dong-Hoon; Jang, Jun-Gi; Jeon, Sang-Young; Kim, Ji-Eun
 PATENT ASSIGNEE(S): S. Korea
 SOURCE: U.S. Pat. Appl. Publ., 163pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20070205412	A1	20070906	US 2007-714167	20070306
KR 2007091540	A	20070911	KR 2007-20836	20070302
KR 872692	B1	20081210		
WO 2007102683	A1	20070913	WO 2007-KR1082	20070305
WO 2007102683	A9	20081224		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA				
EP 1991514	A1	20081119	EP 2007-715485	20070305
R: DE, FR, GB				
CN 101395105	A	20090325	CN 2007-80008185	20080908
PRIORITY APPLN. INFO.:			KR 2006-21119	A 20060306
			WO 2007-KR1082	W 20070305

OTHER SOURCE(S): MARPAT 147:354622

AB Anthracene compds. can be used as a material for an organic material layer of an organic electronic device, including an organic light emitting device, by the introduction of various aryl groups, heteroaryl groups, arylamino groups, or the like to the anthracene compound The organic electronic device

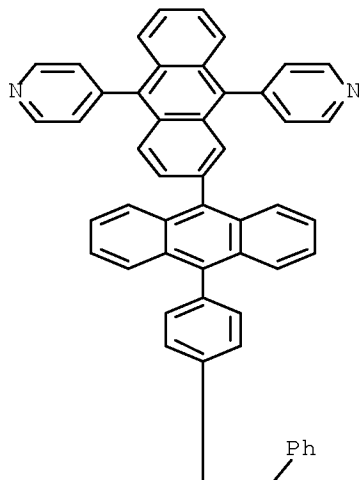
including an organic light emitting device, which uses the anthracene compound as a material for an organic material layer, shows excellent characteristics in efficiency, drive voltage, life time, or the like.

IT 948860-69-3 948860-71-7 948860-73-9

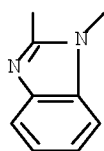
RL: TEM (Technical or engineered material use); USES (Uses)
(anthracene derivs. for organic electronic devices such as LEDs)

RN 948860-69-3 CAPLUS

CN 1H-Benzimidazole, 2-[4-(9,10-di-4-pyridinyl[2,9'-bianthracen]-10'-yl)phenyl]-1-phenyl- (CA INDEX NAME)



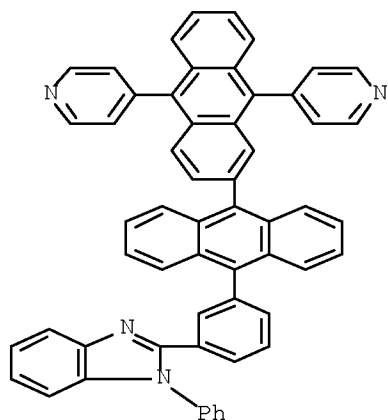
PAGE 1-A



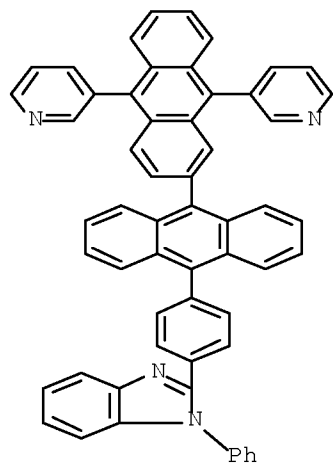
PAGE 2-A

RN 948860-71-7 CAPLUS

CN 1H-Benzimidazole, 2-[3-(9,10-di-4-pyridinyl[2,9'-bianthracen]-10'-yl)phenyl]-1-phenyl- (CA INDEX NAME)



RN 948860-73-9 CAPLUS
 CN 1H-Benzimidazole, 2-[4-(9,10-di-3-pyridinyl[2,9'-bianthracen]-10'-yl)phenyl]-1-phenyl- (CA INDEX NAME)



L14 ANSWER 3 OF 14 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2007:735335 CAPLUS Full-text
 DOCUMENT NUMBER: 149:23289
 TITLE: Metal-organic coordination architectures of 9,10-bis(N-benzimidazolyl)anthracene: syntheses, structures and emission properties
 AUTHOR(S): Li, Lei; Hu, Tong-Liang; Li, Jian-Rong; Wang, Duo-Zhi; Zeng, Yong-Fei; Bu, Xian-He
 CORPORATE SOURCE: Department of Chemistry, Nankai University, Tianjin, 300071, Peop. Rep. China
 SOURCE: CrystEngComm (2007), 9(5), 412-420
 CODEN: CRECF4; ISSN: 1466-8033
 URL: <http://www.rsc.org/ej/CE/2007/b701551h.pdf>
 PUBLISHER: Royal Society of Chemistry
 DOCUMENT TYPE: Journal; (online computer file)

LANGUAGE: English

OTHER SOURCE(S): CASREACT 149:23289

AB A benzimidazole-based rigid ligand, 9,10-bis(N-benzimidazolyl)anthracene (L), was designed and reacted with CuI, AgI, CdII, and MnII salts, giving rise to five new metal-organic coordination architectures, [CuLI]2·2CHCl3·H2O (1), [CdL2(NO3)2]·4EtOH (2), [AgL(BF4)]·3CHCl3 (3), [AgL(NO3)]·2CHCl3 (4) and [MnL2Cl2]·2CHCl3 (5), which were characterized by elemental analyses, IR spectroscopy, and x-ray crystallog. In 1, the CuI ion takes tetrahedral coordination geometry, and the rigid ligands bridge two dinuclear [Cu2I2] units to form a two-dimensional (2-D) layer. 2 And 5 show 2-dimensional network structure with (4,4) topol. in which the metal ions have octahedral coordination geometry. 3 And 4 display 1-dimensional (1-D) chain structures, but show different crystal packing modes due to the effect of anions. The nature of ligand, metal coordination geometry and counteranions have important effects on the structural topologies of such complexes. Also, complexes 1-4 display strong blue emissions in solid state at room temperature

IT 1029901-03-8F 1029901-06-1F 1029901-11-8F
1029901-14-1F

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and crystal structure and fluorescence of transition metal
bis(N-benzimidazolyl)anthracene polymeric complexes)

RN 1029901-03-8 CAPLUS

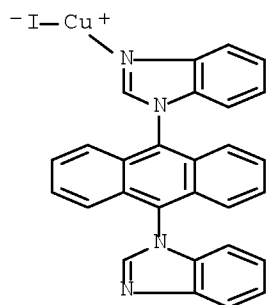
CN Copper, [1-[10-(1H-benzimidazol-1-yl)-9-anthracenyl]-1H-benzimidazole-
κN3]iodo-, compd. with trichloromethane, hydrate (2:2:1) (CA INDEX
NAME)

CM 1

CRN 1029901-02-7

CMF C28 H18 Cu I N4

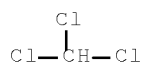
CCI CCS



CM 2

CRN 67-66-3

CMF C H Cl3

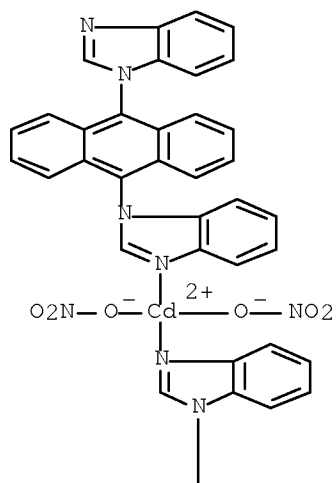


RN 1029901-06-1 CAPLUS
CN Cadmium, bis[1-[10-(1H-benzimidazol-1-yl)-9-anthracenyl]-1H-benzimidazole-
κN3]bis(nitrato-κO)-, (T-4)-, compd. with ethanol (1:4) (CA
INDEX NAME)

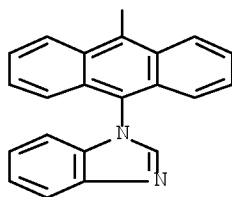
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CRN 1029901-05-0
CMF C56 H36 Cd N10 O6
CCI CCS

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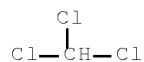


CM 2

CRN 64-17-5
CMF C2 H6 O

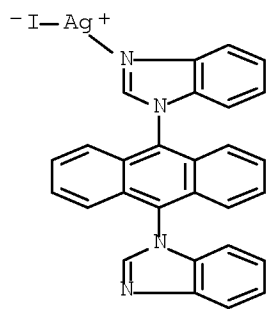
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CMF C H C13

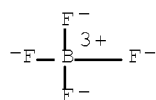


CMF C28 H18 Ag I N4 . B F4

CCI CCS



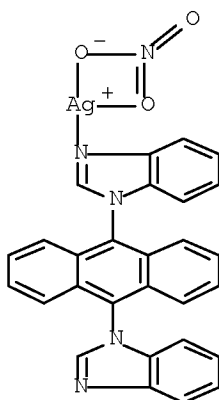
CCI CCS



RN 1029901-14-1 CAPLUS
 CN Silver, [1-[10-(1H-benzimidazol-1-yl)-9-anthracenyl]-1H-benzimidazole-
 κN3](nitrate-κO,κO')-, compd. with trichloromethane
 (1:2) (CA INDEX NAME)

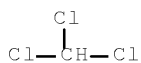
CM 1

CRN 1029901-13-0
 CMF C28 H18 Ag N5 O3
 CCI CCS



CM 2

CRN 67-66-3
 CMF C H Cl3

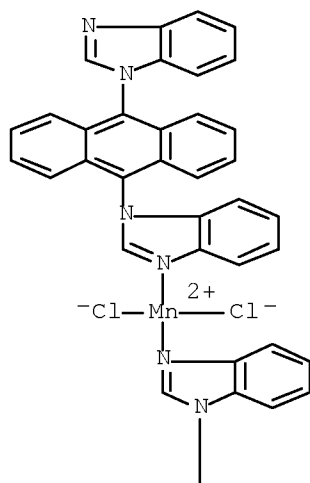


IT 1029901-17-4F
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (preparation and crystal structure of polymeric)
 RN 1029901-17-4 CAPLUS
 CN Manganese, bis[1-[10-(1H-benzimidazol-1-yl)-9-anthracenyl]-1H-
 benzimidazole-κN3]dichloro-, (SP-4-1)-, compd. with dichloromethane
 (1:2) (CA INDEX NAME)

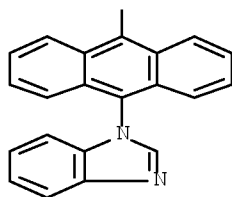
CM 1

CRN 1029901-16-3
 CMF C56 H36 Cl2 Mn N8
 CCI CCS

PAGE 1-A



PAGE 2-A

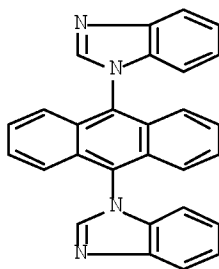


CM 2

CRN 75-09-2
CMF C H2 Cl2

Cl-CH₂-Cl

IT 919382-76-6P
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation, crystal structure, fluorescence and complexation with transition metal ions)
RN 919382-76-6 CAPLUS
CN 1H-Benzimidazole, 1,1'-(9,10-anthracenediyl)bis- (CA INDEX NAME)



REFERENCE COUNT: 94 THERE ARE 94 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 4 OF 14 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2007:647454 CAPLUS Full-text

DOCUMENT NUMBER: 147:82368

TITLE: Novel imidazoquinazoline derivative, process for preparing the same, and organic electronic device using the same

INVENTOR(S): Bae, Jae-Soon; Lee, Dong-Hoon; Lee, Dae-Woong; Jang, Jun-Gi; Jeon, Sang-Young

PATENT ASSIGNEE(S): S. Korea

SOURCE: U.S. Pat. Appl. Publ., 156pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20070131929	A1	20070614	US 2006-637174	20061212
KR 2007062920	A	20070618	KR 2006-125937	20061212
KR 864364	B1	20081017		
WO 2007069847	A1	20070621	WO 2006-KR5420	20061213
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
EP 1960402	A1	20080827	EP 2006-824124	20061213
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR				
JP 2009516652	T	20090423	JP 2008-539943	20061213
CN 101291935	A	20081022	CN 2006-80039399	20080422
PRIORITY APPLN. INFO.:			KR 2005-122778	A 20051213
			WO 2006-KR5420	W 20061213
OTHER SOURCE(S):		MARPAT 147:82368		

AB The present invention relates to a novel imidazoquinazoline derivative, a process for preparing the imidazoquinazoline derivative, and an organic electronic device using the imidazoquinazoline derivative as hole injecting, hole transporting, electron injecting, electron transporting, or a light emitting material, where the organic electronic device includes an organic light emitting device, and the device according to the present invention exhibits excellent characteristics in efficiency, operating voltage, and stability.

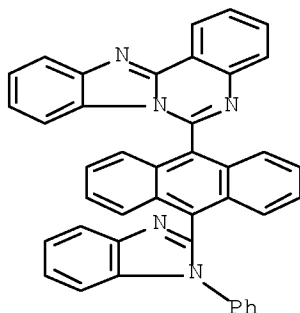
IT 940965-58-2F

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(novel imidazoquinazoline derivative, process for preparation, and organic electronic device using imidazoquinazoline derivative)

RN 940965-58-2 CAPLUS

CN Benzimidazo[1,2-c]quinazoline, 6-[10-(1-phenyl-1H-benzimidazol-2-yl)-9-anthracenyl]- (CA INDEX NAME)



L14 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2006:1200215 CAPLUS Full-text

DOCUMENT NUMBER: 146:142201

TITLE: Electronic structures and optical properties of two anthracene derivatives

AUTHOR(S): Zhang, Peng; Xia, Baohui; Sun, Yinghui; Yang, Bing; Tian, Wenjing; Wang, Yue; Zhang, Guo

CORPORATE SOURCE: Key Laboratory for Supramolecular Structure and Materials of Ministry of Education, Jilin University, Changchun, 130012, Peop. Rep. China

SOURCE: Chinese Science Bulletin (2006), 51(20), 2444-2450
CODEN: CSBUEF; ISSN: 1001-6538

PUBLISHER: Science in China Press

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The electronic structures and the optical properties of two anthracene derivs., DBMA and DAA, are investigated by both exptl. techniques and quantum chemical calcns. The cyclic voltammetry and differential pulse polarog. measurement revealed that the introduction of benzol-imidazol and pyrrolo-pyridine group on the anthracene block can affect the electrochem. behavior of DBMA and DAA. Both UV/visible absorption and emission spectra of DBMA and DAA are red-shifted in contrast to the unsubstituted anthracene, so that the anthracene derivs. emit at blue-green region and the luminescence yields are remarkably elevated (over 90%). The B3LYP/6-31G theor. calcns. explored that the electronic structures of the anthracene derivs. are perturbed by the side

substitutes on the anthracene block, and the slight variation of the electronic structures results in the enhanced electron accepting ability and the decrease of the HOMO-LUMO energy gap, which is the origin of the emission to be shifted to blue-green region. The non-planar geometry structures of DBMA and DAA are responsible for the excellent luminescence yields.

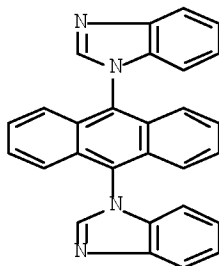
IT 919382-76-6

RL: PRP (Properties)

(electronic structure and optical properties of two anthracene derivs.)

RN 919382-76-6 CAPLUS

CN 1H-Benzimidazole, 1,1'-(9,10-anthracenediyl)bis- (CA INDEX NAME)



REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 6 OF 14 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2005:1126669 CAPLUS [Full-text](#)

DOCUMENT NUMBER: 143:405909

TITLE: Preparation of benzimidazole derivatives for use in organic electroluminescent elements

INVENTOR(S): Kawamura, Masahiro; Yamamoto, Hiroshi; Hosokawa, Chishio

PATENT ASSIGNEE(S): Idemitsu Kosan Co., Ltd., Japan

SOURCE: PCT Int. Appl., 95 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005097756	A1	20051020	WO 2005-JP6605	20050404
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
EP 1734038	A1	20061220	EP 2005-728853	20050404

R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR

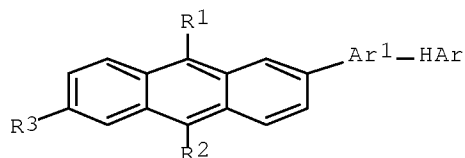
US 20070200490	A1	20070830	US 2005-594323	20050927
KR 2007023676	A	20070228	KR 2006-720721	20061002
IN 2006CN03702	A	20070615	IN 2006-CN3702	20061006
CN 101384560	A	20090311	CN 2005-80018269	20061204

PRIORITY APPLN. INFO.:

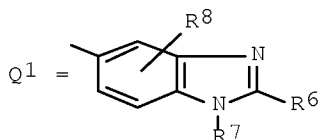
JP 2004-112799	A	20040407
WO 2005-JP6605	W	20050404

OTHER SOURCE(S): MARPAT 143:405909

GI



I



AB The title compds., e.g. I [R1 - R3 = substituent; Ar1 = single bond, divalent connecting group; HAr = Q1, etc.; R6 - R8 = substituent] are prepared. Thus, 1,2-diphenyl-5-[4-(9,10-diphenylanthracen-2-yl)phenyl]-1H-benzimidazole was prepared in a multistep process from 2-aminoanthraquinone. The high luminescent efficiency of organic electroluminescent elements containing compds. of this invention was demonstrated.

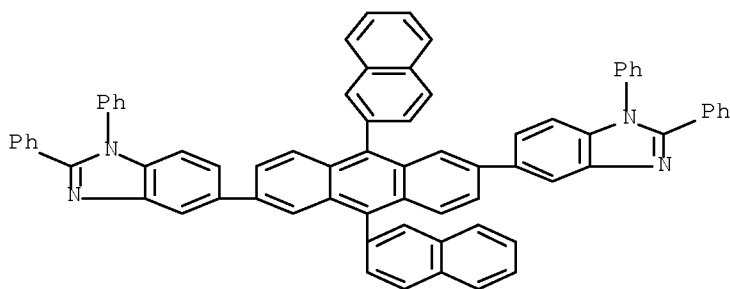
IT 867044-23-3P 867044-24-4P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(preparation of benzimidazole derivs. for use in organic electroluminescent elements)

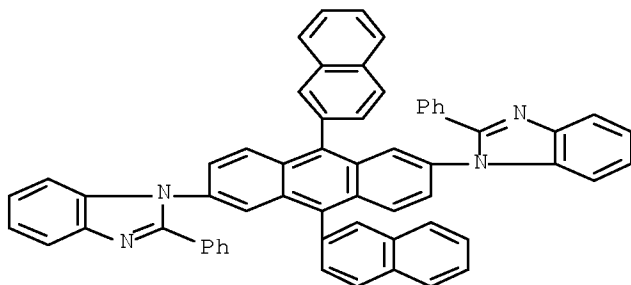
RN 867044-23-3 CAPLUS

CN 1H-Benzimidazole, 5,5'-(9,10-di-2-naphthalenyl-2,6-anthracenediyl)bis[1,2-diphenyl- (CA INDEX NAME)



RN 867044-24-4 CAPLUS

CN 1H-Benzimidazole, 1,1'-(9,10-di-2-naphthalenyl-2,6-anthracenediyl)bis[2-phenyl- (CA INDEX NAME)



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 7 OF 14 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2005:1125867 CAPLUS Full-text

DOCUMENT NUMBER: 143:376232

TITLE: Organic electroluminescent devices with long service life and novel anthracene compounds therefor

INVENTOR(S): Inoue, Koji; Aoki, Yoji; Kagayama, Akifumi; Tamatani, Hiroaki; Totani, Yoshiyuki

PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 77 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2005289921	A	20051020	JP 2004-108826	20040401
PRIORITY APPLN. INFO.:			JP 2004-108826	20040401

OTHER SOURCE(S): MARPAT 143:376232

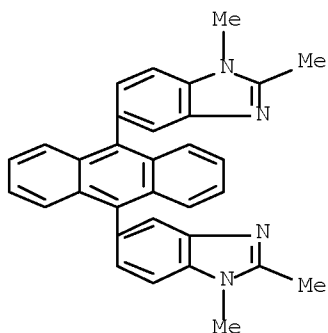
AB The anthracene compds. are substituted by Y1-Y10 [Y1-Y10 = H, halo, cyano, nitro, amino, ester, etc., essentially including Q (X = O, S, or NR; R, R1, R2 = H, halo, cyano, nitro, amino, etc.)]. Organic LED containing the compds. in emission layers or in hole-injecting/transporting layers are further claimed.

IT 866332-13-0P 866332-14-1P

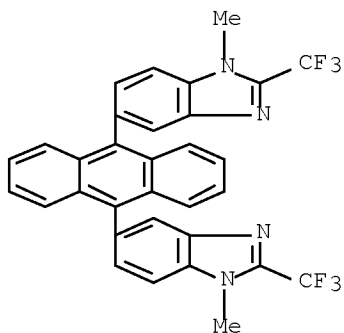
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (long-life organic LED containing benzoxazolyl-substituted anthracene compds.)

RN 866332-13-0 CAPLUS

CN 1H-Benzimidazole, 5,5'-(9,10-anthracenediyl)bis[1,2-dimethyl- (CA INDEX NAME)



RN 866332-14-1 CAPLUS
 CN 1H-Benzimidazole, 5,5'-(9,10-anthracenediyl)bis[1-methyl-2-(trifluoromethyl)- (CA INDEX NAME)



L14 ANSWER 8 OF 14 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2002:849756 CAPLUS [Full-text](#)
 DOCUMENT NUMBER: 137:360139
 TITLE: Double-spiro organic compounds and electroluminescent devices
 INVENTOR(S): Kim, Kong-Kyeum; Son, Se-Hwan; Yoon, Seok-Hee; Bae, Jae-Soon; Lee, Youn-Gu; Im, Sung-Gap; Kim, Ji-Eun; Lee, Jae-Chol
 PATENT ASSIGNEE(S): LG Chem, Ltd., S. Korea
 SOURCE: PCT Int. Appl., 117 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

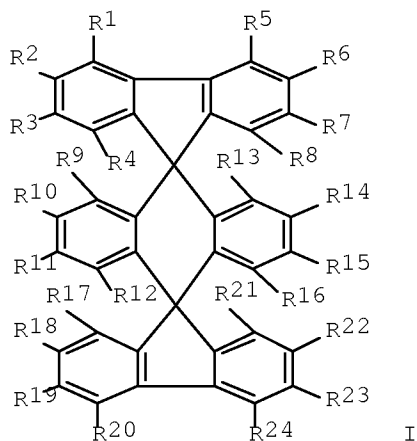
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2002088274	A1	20021107	WO 2002-KR458	20020318
W: CN, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				

KR 2002083614	A	20021104	KR 2001-23038	20010427
KR 2002083615	A	20021104	KR 2001-23039	20010427
US 20040023060	A1	20040205	US 2002-99781	20020314
US 6998487	B2	20060214		
EP 1294823	A1	20030326	EP 2002-705589	20020318
EP 1294823	B1	20061213		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
JP 2004529937	T	20040930	JP 2002-585559	20020318
JP 3971310	B2	20070905		
EP 1645552	A1	20060412	EP 2005-20697	20020318
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
AT 348136	T	20070115	AT 2002-705589	20020318
ES 2274003	T3	20070516	ES 2002-705589	20020318
TW 591096	B	20040611	TW 2002-91105844	20020326
US 20040170863	A1	20040902	US 2003-718083	20031119
US 6984462	B2	20060110		

PRIORITY APPLN. INFO.:

KR 2001-23038	A	20010427
KR 2001-23039	A	20010427
US 2002-99781	A3	20020314
EP 2002-705589	A3	20020318
WO 2002-KR458	W	20020318

OTHER SOURCE(S): MARPAT 137:360139
GI



AB Double-spiro organic compds. are claimed which are described by the general formula I (R1-24 = independently selected substituents not all of which are H). Light-emitting, hole-transporting, and electron-transporting materials comprising the compds. are also described. Electroluminescent materials comprising the compds, including deposited films, methods for depositing the materials, and organic electroluminescent devices employing the materials, and method for fabricating the devices, are also described.

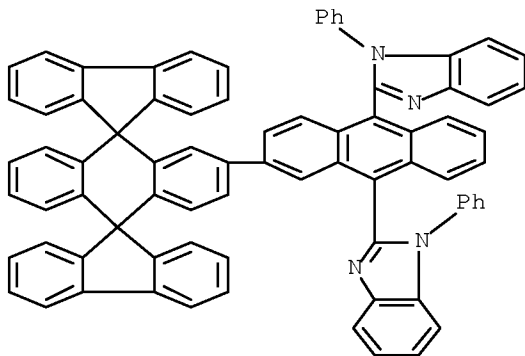
IT ~~474688-28-3~~

RL: DEV (Device component use); USES (Uses)
(double-spiro organic compds. and electroluminescent devices using them)

RN 474688-28-3 CAPLUS

CN 1H-Benzimidazole, 2,2'-(2-dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluoren]-2'-yl-9,10-anthracenediyl)bis[1-phenyl- (9CI) (CA

INDEX NAME)



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 9 OF 14 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1990:236808 CAPLUS Full-text

DOCUMENT NUMBER: 112:236808

ORIGINAL REFERENCE NO.: 112:39950h,39951a

TITLE: Synthesis of 9,10-bis-hetaryl anthracenes and their application on polyester fibers as disperse dyes

AUTHOR(S): Rangnekar, D. W.; Rajadhyaksha, D. D.

CORPORATE SOURCE: Dyes Res. Lab., Dep. Chem. Technol., Matunga, 400 019, India

SOURCE: Journal of Chemical Technology and Biotechnology (1990), 47(2), 137-42

CODEN: JCTBED; ISSN: 0268-2575

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 112:236808

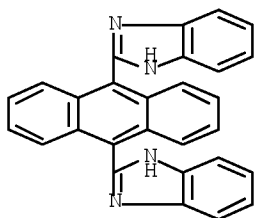
AB 9,10-Dibromoanthracene obtained from anthracene by bromination was reacted with CuCN in refluxing DMF to obtain 9,10-dicyanoanthracene (I). I was considered with o-phenylenediamine, o-aminophenol, and dicyanodiamide to give 9,10-bis(benzimidazol-2-yl)anthracene (II), 9,10-bis(benzoxazol-2-yl)anthracene (III) and 9,10-bis(4,6-diamino-S-triazin-2-yl)anthracene (IV), resp. The spectral properties of II, III, and IV were studied. These compds., when applied as disperse dyes on polyester fibers, gave excellent results.

IT 127388-23-2P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as dye for polyester fibers)

RN 127388-23-2 CAPLUS

CN 1H-Benzimidazole, 2,2'-(9,10-anthracenediyl)bis- (CA INDEX NAME)



L14 ANSWER 10 OF 14 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1983:35054 CAPLUS Full-text

DOCUMENT NUMBER: 98:35054

ORIGINAL REFERENCE NO.: 98:5495a,5498a

TITLE: Two-stage polybenzimidazole synthesis via poly(azomethine) intermediates

AUTHOR(S): Neuse, Eberhard W.; Loonat, Mohamed S.

CORPORATE SOURCE: Dep. Chem., Univ. Witwatersrand, Johannesburg, 2001, S. Afr.

SOURCE: Macromolecules (1983), 16(1), 128-36

CODEN: MAMOBX; ISSN: 0024-9297

DOCUMENT TYPE: Journal

LANGUAGE: English

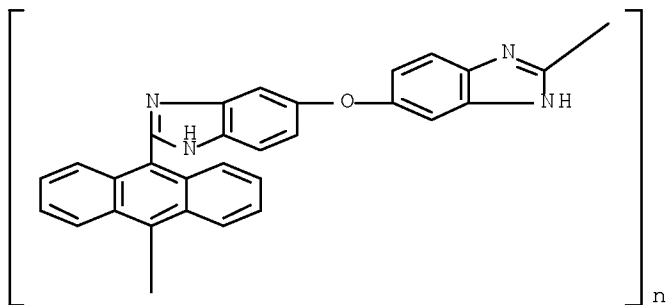
AB Polybenzimidazoles containing phenylene (optionally halogenated), anthracenediyl, biphenylene, naphthalenediyl, and (η 6-tricarbonylchromium)-1,4-phenylene bridging groups were prepared in solution at -18° to $+25^{\circ}$ from aromatic bis(1,2-diamines) and aromatic dialdehydes via isolable poly(azomethines). The poly(azomethines) were subjected to mild oxidative cyclodehydration to obtain the polybenzimidazoles.

IT 83802-34-0P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 83802-34-0 CAPLUS

CN Poly(1H-benzimidazole-2,5-diyl-1,4-phenylene) (9CI) (CA INDEX NAME)



L14 ANSWER 11 OF 14 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1983:35051 CAPLUS Full-text

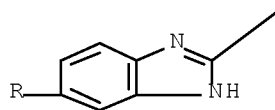
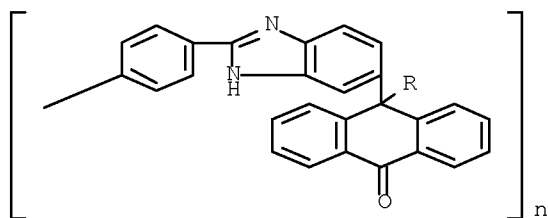
DOCUMENT NUMBER: 98:35051

ORIGINAL REFERENCE NO.: 98:5495a,5498a

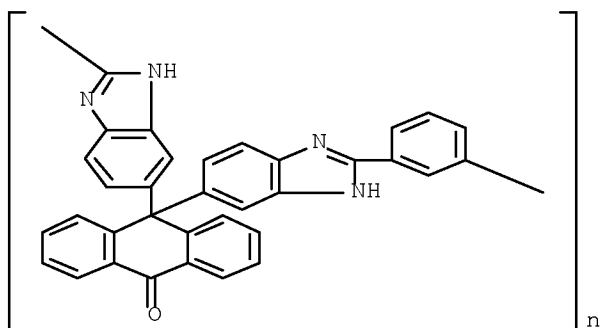
TITLE: Preparation and properties of polybenzimidazoles containing cardo groups
 AUTHOR(S): Srinivasan, P. R.; Mahadevan, V.; Srinivasan, M.
 CORPORATE SOURCE: Dep. Chem., Indian Inst. Technol., Madras, 600 036, India
 SOURCE: Journal of Polymer Science, Polymer Chemistry Edition (1982), 20(11), 3095-105
 CODEN: JPLCAT; ISSN: 0360-6376
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB Polybenzimidazoles containing cardo groups were prepared from 9,9-bis(4-carboxyphenyl)fluorene (I) [54941-51-4] and 9,9-bis(3,4-diaminophenyl)fluorene [84184-85-0] or 9,9-bis(3,4-diaminophenyl)10-anthrone [84184-89-4]; I was condensed with aromatic tetramines and the cardotetramines were condensed with aromatic dicarboxylic acids. The model compds. 9,9-bis[4-benzimidazol-2-ylphenyl]fluorene [84184-90-7] and 5,5'-(9-fluorenylidene)bis(2-phenylbenzimidazole) [84184-91-8] were prepared and characterized by spectrometry. The polymers were obtained in 60-70 % yield with reduced viscosity 0.7-1.1 dL/g. They were soluble in DMF and chlorinated solvents, e.g. C₂H₂Cl₄. The thermal stability of the cardo polymers was higher than that of noncardo polybenzimidazoles.

IT 84073-28-9P 84073-29-0P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (preparation and properties of)
 RN 84073-28-9 CAPLUS
 CN Poly[1H-benzimidazole-2,5-diyl(10-oxo-9(10H)-anthracenylidene)-1H-benzimidazole-5,2-diyl-1,4-phenylene] (9CI) (CA INDEX NAME)



RN 84073-29-0 CAPLUS
 CN Poly[1H-benzimidazole-2,5-diyl(10-oxo-9(10H)-anthracenylidene)-1H-benzimidazole-5,2-diyl-1,3-phenylene] (9CI) (CA INDEX NAME)



L14 ANSWER 12 OF 14 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1972:73618 CAPLUS Full-text

DOCUMENT NUMBER: 76:73618

ORIGINAL REFERENCE NO.: 76:11857a,11860a

TITLE: Fiber-forming anthraquinone-bisbenzazole polymers

INVENTOR(S): Marvel, Carl S.

PATENT ASSIGNEE(S): Research Corp.

SOURCE: U.S., 2 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3620999	A	19711116	US 1969-884013	19691210
PRIORITY APPLN. INFO.:			US 1969-884013	A 19691210

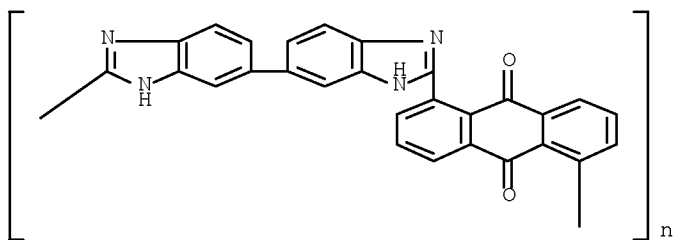
AB Heat-resistant anthraquinone derivative polymers I (X = NH, O, S) are prepared by polymerization of diphenyl 1,5-anthraquinonedicarboxylate (II) with benzidine derivs. Thus, heating equimolar amts. II and 3,3-dimercaptobenzidine 3 hr at 240.deg. and 12 hr at 300.deg. in vacuum gives 97% poly([5,5'-bibenzimidazole]-2,2'-diyl-1,5-anthraquinonylene) (I, X = S) [34090-44-3], showing no weight loss at temps. <500.deg.. Similar polymerization of II with 3,3',4,4'-biphenyltetraamine gives poly([5,5'-bibenzothiazole]-2,2'-diyl-1,5-anthraquinonylene) (I, X = NH) [34090-45-4], losing weight gradually at >350.deg.. Fibers can be spun from sodium dithionite [7775-14-6] solns. of the polymers into H2SO4.

IT ~~31724-39-7~~

RL: USES (Uses)
(fiber, heat-resistant)

RN 31724-39-7 CAPLUS

CN Poly[5,5'-bi-1H-benzimidazole-2,2'-diyl(9,10-dihydro-9,10-dioxo-1,5-anthracenediyl)] (CA INDEX NAME)



L14 ANSWER 13 OF 14 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1971:42700 CAPLUS Full-text

DOCUMENT NUMBER: 74:42700

ORIGINAL REFERENCE NO.: 74:6877a,6880a

TITLE: Polymers containing anthraquinone units:
benzimidazole and benzothiazole polymers

AUTHOR(S): Kokelenberg, Hendrik; Marvel, Carl S.

CORPORATE SOURCE: Dep. Chem., Univ. Arizona, Tucson, AZ, USA

SOURCE: Journal of Polymer Science, Part A-1: Polymer
Chemistry (1970), 8(11), 3199-209
CODEN: JPSPC3; ISSN: 0449-296X

DOCUMENT TYPE: Journal

LANGUAGE: English

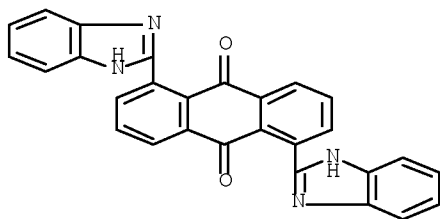
AB Diphenyl 1,5-anthraquinonedicarboxylate was treated with 3,3'-
dimercaptobenzidine and 3,3'-diaminobenzidine under various conditions.
Although the ester reacted readily, side reactions prevented the formation of
high mol. weight compds. At the elevated temps. required for reaction, the
quinone group was involved in a type of Schiff base formation. The thermal
stability of the polymers was evaluated. Model compds. were prepared and
their absorption spectra compared with those of the polymers. 1,5-
Anthraquinonedimide-2-benzimidazole formed a stable product with AcOH. Some of
the polymers could be solubilized by reduction with Na dithionite in alkali,
but no useful fibers were produced from these solns.

IT 30566-16-6P 31724-39-7P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

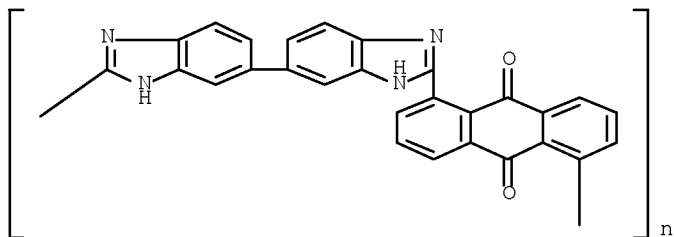
RN 30566-16-6 CAPLUS

CN 9,10-Anthracenedione, 1,5-bis(1H-benzimidazol-2-yl)- (CA INDEX NAME)



RN 31724-39-7 CAPLUS

CN Poly[5,5'-bi-1H-benzimidazole-2,2'-diyl(9,10-dihydro-9,10-dioxo-1,5-
anthracenediyl)] (CA INDEX NAME)



L14 ANSWER 14 OF 14 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1971:32036 CAPLUS Full-text

DOCUMENT NUMBER: 74:32036

ORIGINAL REFERENCE NO.: 74:5149a,5152a

TITLE: Benzimidazole, benzothiazole, and benzoxazole polymers with anthracene recurring units

AUTHOR(S): Kokelenberg, Hendrik; Marvel, Carl S.

CORPORATE SOURCE: Dep. Chem., Univ. Arizona, Tucson, AZ, USA

SOURCE: Journal of Polymer Science, Part A-1: Polymer Chemistry (1970), 8(11), 3235-49
CODEN: JPSPC3; ISSN: 0449-296X

DOCUMENT TYPE: Journal

LANGUAGE: English

AB In an attempt to prepare polymers which might be oxidized to compds. soluble in alkali, di-Ph 1,5-anthracenedicarboxylate was treated with diaminobenzidine, dimercaptobenzidine, and diaminobiphenol in the melt and with dimercaptobenzidine di-HCl in polyphosphoric acid. Compds. of high mol. weight were obtained and their thermal and oxidative stability evaluated. Model compds. were prepared and their uv spectra compared with those of the polymers. Oxidation with HNO₃ or Cr trioxide yielded anthraquinone derivs., but side reactions prevented the formation of useful products.

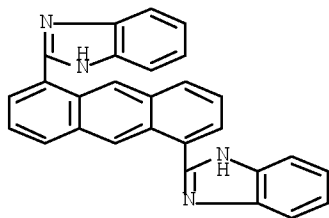
IT 30133-23-4

RL: USES (Uses)

(model compds., for anthracene group-containing polyheterocycles)

RN 30133-23-4 CAPLUS

CN Benzimidazole, 2,2'-(1,5-anthrylene)bis- (8CI) (CA INDEX NAME)



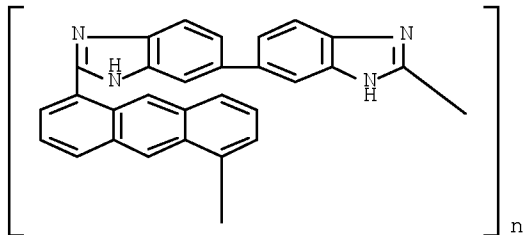
IT 31583-71-8P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 31583-71-8 CAPLUS

CN Poly([5,5'-bi-1H-benzimidazole]-2,2'-diyl-1,5-anthracenediyl) (9CI) (CA

INDEX NAME)



FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 91998 TO 99002
PROJECTED ANSWERS: 217 TO 833

L15 11 SEA SSS SAM L1

=> s l11 ful
FULL SEARCH INITIATED 10:49:10 FILE 'MARPAT'
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SEARCH TIME: 00.00.15

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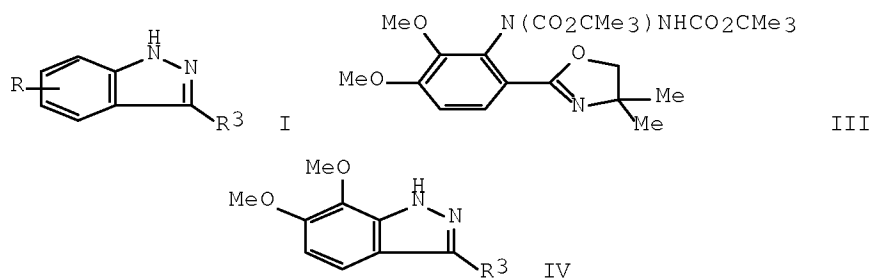
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L17 0 L16 AND PATENT/DT

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L16 ANSWER 520 OF 528 MARPAT COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 112:77202 MARPAT Full-text
TITLE: Preparation of aryl hydrazines and indazoles
INVENTOR(S): Demers, James P.
PATENT ASSIGNEE(S): Ortho Pharmaceutical Corp., USA
SOURCE: U.S., 4 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

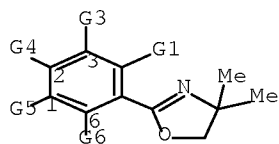
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4864032	A	19890905	US 1987-69073	19870702
PRIORITY APPLN. INFO.:			US 1987-69073	19870702

GI

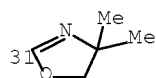


AB Aryl hydrazines and indazoles I ($R \geq 1$ of Cl, F, NR₄, OR₄, SR₄, 4,4-dimethyl-2-oxazinyl, R₄ = (un)substituted C₁-6 alkyl; adjacent RR = atoms to complete a fused aromatic ring; R₃ = OH, OCH₂CMe₂NH₂, NHCMe₂CH₂OH) were prepared by condensation of aryllithiums or aryl Grignards with R₂O₂CN:NCOR₂ (II; R₂ = alkyl, aralkyl, etc.) and subsequent decarboxylation or cyclization. Thus, 2-(3,4-dimethoxyphenyl)-4,4-dimethyloxazoline was stirred 30 min at -60° with BuLi in THF after which the solution was cooled to -75° and II (R₂ = CMe₃) was added rapidly to give oxazinylphenylhydrazine III which was treated with anhydrous HCl in EtOAc to give indazoles IV [R₃ = OH (11%), NHCMe₂CHOH (6.3%), and OCH₂CMe₂NH₂ (42%).

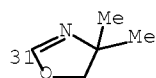
MSTR 1



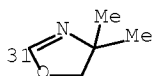
G3 = 31



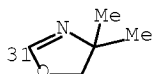
G4 = 31



G5 = 31



G6 = 31



G3 +G4 = R <"fused ring">

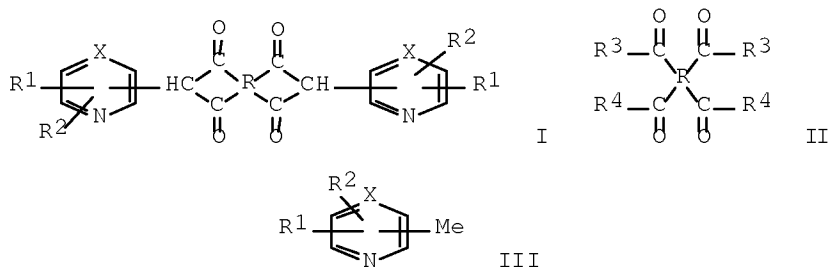
Patent location: claim 1

Note: at least one of G3, G4, G5 and G6 is not H

L16 ANSWER 521 OF 528 MARPAT COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 109:230813 MARPAT Full-text
 TITLE: Preparation of nitrogen-containing
 diheterocyclyldicyclopentadione derivatives
 INVENTOR(S): Niwa, Takakazu; Kurohara, Takayuki; Motoyama, Yukio
 PATENT ASSIGNEE(S): Koei Chemical Industry Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 63091369	A	19880422	JP 1986-238660	19861007
JP 2519430	B2	19960731		

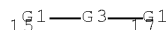
PRIORITY APPLN. INFO.: JP 1986-238660 19861007
 GI



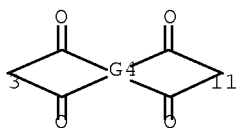
AB The title compds. (I; R = C6-13 aromatic compound residue; R1, R2 = H, C1-2 alkyl; X = CH, N), useful as organic pigments and monomers, are prepared by condensation of aromatic dicarboxylic acids or anhydrides II (R3, R4 = OH;

R3R4 = O) with methylheterocyclic compds. III (R1 defined as above). A mixture of 6.54 g pyromellitic anhydride and 8.56 g 2,6-dimethylpyridine in AcOH was refluxed for 8 h to give 10.56 g I (R = 1,2,4,5-benzenetetrayl, R1 = H, R2 = 2-Me, X = CH).

MSTR 1



G1 = pyrazinyl (substd. by (2) G2)
G3 = 3-15 11-17



G4 = R <"C6-13 aromatic tetravalent organic residue">
Patent location: claim 1

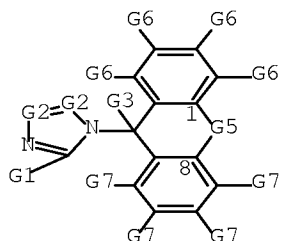
L16 ANSWER 522 OF 528 MARPAT COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 109:222464 MARPAT Full-text
TITLE: Method of inhibiting aromatase and treating
estrogen-dependent diseases with azole derivatives
INVENTOR(S): Hirsch, Kenneth S.; Taylor, Harold M.
PATENT ASSIGNEE(S): Eli Lilly and Co., USA
SOURCE: U.S., 4 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4757082	A	19880712	US 1984-621406	19840618
PRIORITY APPLN. INFO.:			US 1984-621406	19840618

GI For diagram(s), see printed CA Issue.

AB Aromatase is inhibited and estrogen-dependent diseases are treated in a mammal by administering an aromatase-inhibiting or effective amount of azole derivative I [Q = H, Me; E, D = CH, N; A = H, C1-3 alkyl, pyridyl, Ph, Ph substituted with halo, CF3, C1-3 alkyl, C1-3 alkoxy; G = bond, O, S, CH2, (CH2)2, CH:CH, CH2O, CH2S; R1, R2 = H, C1-3 alkyl, CF3, halo, C1-3 alkoxy] or a pharmaceutically acceptable salt. Compds. 1-(9H-fluoren-9-yl)-1H-imidazole HCl and 1-(10,11-dihydro-5H-dibenzo-[a,d]cyclohepten-5-yl)-1H-imidazole nitrate inhibited aromatase with EC50 = 0.21 and 2.0 μ M, resp., in a rat ovarian microsome assay (substrate androstenedione concentration = 0.1 μ M).

MSTR 1



G2 = CH
G3 = pyridyl
G5 = CH2

Derivative: or a pharmaceutically acceptable salt
Patent location: claim 1

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

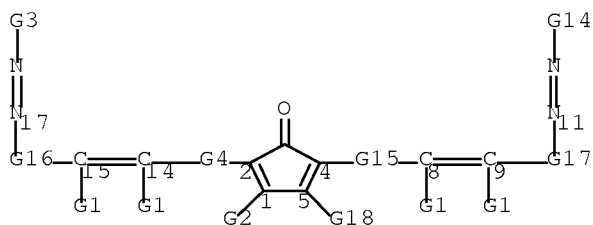
L16 ANSWER 523 OF 528 MARPAT COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 109:219578 MARPAT Full-text
TITLE: Disazo dye charge-generating photoconductors for electrophotographic plates
INVENTOR(S): Miyazaki, Hajime
PATENT ASSIGNEE(S): Canon K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 63163364	A	19880706	JP 1986-308180	19861226
PRIORITY APPLN. INFO.:			JP 1986-308180	19861226

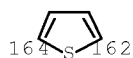
GI For diagram(s), see printed CA Issue.

AB An electrophotog. plate with improved sensitivity and durability has a photoconductive layer containing as a charge-generating photoconductor a disazo pigment of the formula I (R1-R4 = H, electron-withdrawing group; R5, R6 = H, alkyl, aralkyl, aryl, R5 and R6 may form alicyclic, aromatic, or heterocyclic ring; A, Al = coupler residue having phenolic OH; Z1-Z4 = arylene, heterocyclylene). Thus, a compound I (A = Al = 2-hydroxy-3-phenylcarbamoylnaphthyl; R1-R6 = H; Z1-Z4 = p-phenylene) was used as a charge-generating photoconductor for an electrophotog. plate.

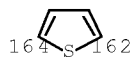
MSTR 1A



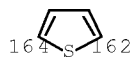
G4 = 164-14 162-2



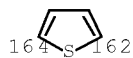
G15 = 164-4 162-8



G16 = 164-17 162-15



G17 = 164-9 162-11



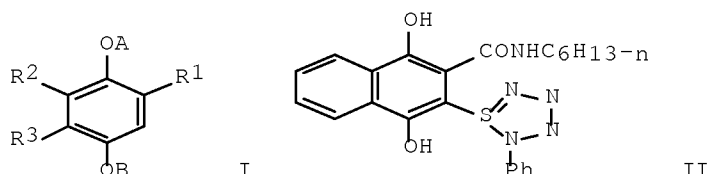
G2 +G18= R <"moiety necessary to complete a ring">
Patent location: claim 1

L16 ANSWER 524 OF 528 MARPAT COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 109:201310 MARPAT Full-text
TITLE: Silver halide photographic material resistant to pressure marking
INVENTOR(S): Kawasaki, Mikio; Ono, Koji
PATENT ASSIGNEE(S): Konica Co., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

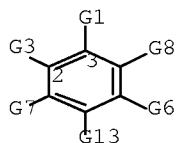
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 63089844	A	19880420	JP 1986-235925	19861002
PRIORITY APPLN. INFO.:			JP 1986-235925	19861002

GI



AB The title photog. material contains photosensitive Ag halide, internally fogged Ag halide, and I (A, B = hydrolyzable group; R1-3 = H, alkyl, aryl, alkylthio, arylthio, halo, OH, alkoxy, aryloxy, acyl, alkoxy-carbonyl, amido, sulfonamido, carbamoyl, sulfamoyl, heterocyclyl, or development inhibitor group which is benzotriazolyl, tetrazolyl, or SR4; R4 = N-containing heterocyclyl). The material has high resistivity to pressure mark, especially that by conveyer roller in an automatic processing system, and has high covering power. Thus, Ag halide emulsion containing surface-latent image particles and internally fogged particles was mixed with II and other agents was applied on PET film. A protective layer containing non-photosensitive Ag(Cl,Br) and other agents was formed on the emulsion layer. Unexposed film was processed in an automatic processing system having conveyer rollers with rough surface, to obtain film without pressure mark. Films containing I in protective layer also showed the same advantage.

MSTR 1C



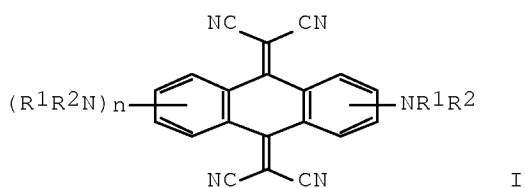
G6 = tetrazolyl (opt. substd.)
 G7 = benzotriazolyl (opt. substd.)
 G1 +G3 = R <"group to form non-aromatic ring">
 Patent location: claims

L16 ANSWER 525 OF 528 MARPAT COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 109:180412 MARPAT Full-text
 TITLE: TCNQ alkylamino derivatives as charge carriers for

electrophotographic photoreceptors
 INVENTOR(S): Akasaki, Yutaka; Sato, Katsuhiko; Tokida, Akihiko
 PATENT ASSIGNEE(S): Fuji Xerox Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 63104061	A	19880509	JP 1986-249540	19861022
JP 05024504	B	19930408		

PRIORITY APPLN. INFO.: JP 1986-249540 19861022
 GI

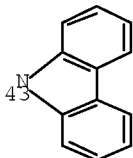


AB Compds. I ($n = 0, 1$; $R_1-R_2 = H, \text{ alkyl, aryl, aralkyl, alkoxyalkyl, acyl, or jointly form divalent ring groups } (C_2H_4)O(C_2H_4), 2,2'\text{-biphenylene, } 5,5'\text{-dimethyl-}2,2'\text{-biphenylene, or } CH_2(o-C_6H_4)CH_2, \text{ but not both H) are used as electronic materials. I can be used as bipolar-chargeable electronic materials singly, not as a part of charge-transfer complexes. Thus, a dispersion containing I } (R_1, R_2 = Me) \text{ 10, poly(vinyl butyral) 10, and BuOH 100 parts was applied on an Al plate and dried to form a } 0.3\text{-}\mu\text{m} \text{ layer. Then a } 20\text{-}\mu\text{m} \text{ layer containing N,N'-diphenyl-N,N'-bis(3-methylphenyl)-[1,1'-biphenyl]-4,4'-diamine and polycarbonate was formed to obtain an electrophotog. photoreceptor, which was chargeable to } -920 \text{ V and showed photosensitivity (exposure required for half decay of voltage) } 5.4.$

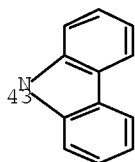
MSTR 1

${}^8G_2 \text{---} G_6 \text{---} {}^8G_1$

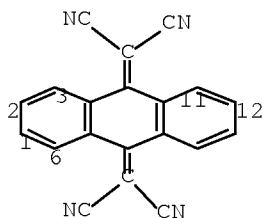
G1 = 43



G2 = 43



G6 = 11-82 3-80 / 11-82 2-80 / 11-82 1-80 /
11-82 6-80 / 12-82 3-80 / 12-82 2-80 / 12-82 1-80 /
12-82 6-80



Patent location: claims
Note: substitution is restricted

L16 ANSWER 526 OF 528 MARPAT COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 100:53202 MARPAT Full-text
TITLE: Anthraquinone dyes and dichroic material containing
these dyes
INVENTOR(S): Blunck, Martin; Claussen, Uwe; Kroeck, Friedrich
Wilhelm; Neeff, Ruetger
PATENT ASSIGNEE(S): Bayer A.-G. , Fed. Rep. Ger.
SOURCE: Ger. Offen., 105 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

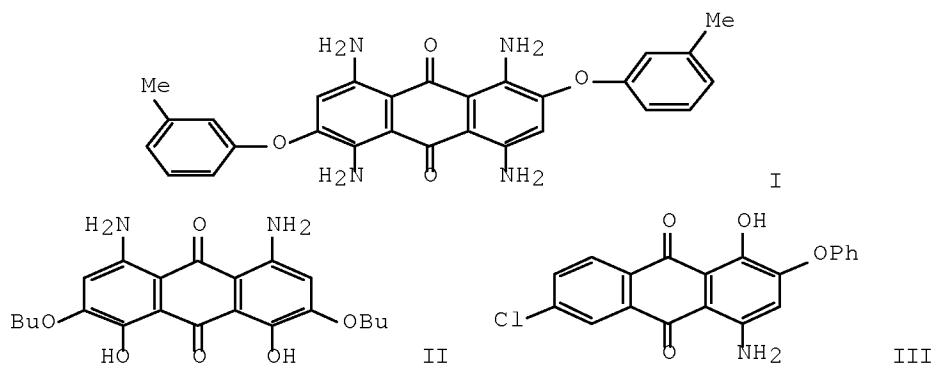
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DE 3216455	A1	19831117	DE 1982-3216455	19820503
EP 93367	A2	19831109	EP 1983-104021	19830425
EP 93367	A3	19860827		
EP 93367	B1	19890913		
R: CH, DE, FR, GB, LI, NL				
JP 58196260	A	19831115	JP 1983-73103	19830427
JP 04042438	B	19920713		
FR 2563227	A1	19851025	FR 1984-6147	19840418
US 4689171	A	19870825	US 1985-774112	19850909

PRIORITY APPLN. INFO.:

DE 1982-3216455 19820503

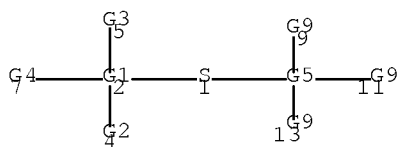
US 1983-485098 19830404

GI

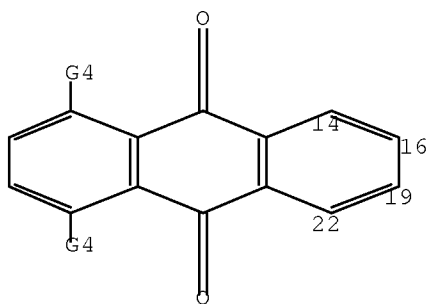


AB Anthraquinone dyes (599) for use in liquid-crystal electrooptical displays were prepared by conventional methods. The dyes are blue to violet and have high order parameters (S) when dissolved in liquid crystal compns. such as alkyl(cyanoaryl)cyclohexane mixts. Typical dyes are I [83424-42-4] (S 0.78), II [88602-44-2] (S 0.73), and III [88602-45-3] (S 0.73).

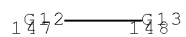
MSTR 1



G1 = 14-1 16-4 19-5 22-7



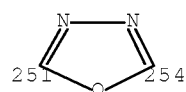
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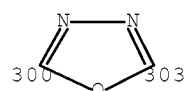
G3 = 266



G12 = 251-2 254-148



G18 = 300-2 303-267



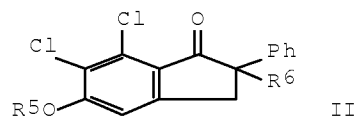
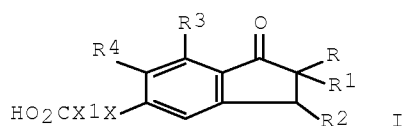
Patent location: claims
Note: record may include structures from disclosure

L16 ANSWER 527 OF 528 MARPAT COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 89:197223 MARPAT Full-text
TITLE: (1-Oxo-2-aryl or thienyl-2-substituted-5-indanyloxy
(or thio) alkanolic acids and derivatives
INVENTOR(S): Cragoe, Edward J., Jr.; Woltersdorf, Otto W., Jr.
PATENT ASSIGNEE(S): Merck and Co., Inc., USA
SOURCE: U.S., 25 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 4096267	A	19780620	US 1975-585434	19750610
FI 7402789	A	19750412	FI 1974-2789	19740925
FI 61866	B	19820630		
FI 61866	C	19821011		
SE 7412046	A	19750414	SE 1974-12046	19740925
SE 423990	B	19820621		
SE 423990	C	19820930		

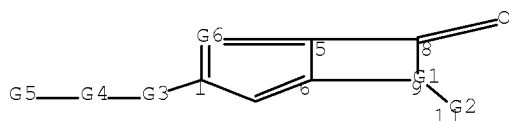
DK 7405066	A	19750609	DK 1974-5066	19740926
DK 143553	B	19810907		
DK 143553	C	19820215		
NO 7403495	A	19750414	NO 1974-3495	19740927
NO 147747	B	19830228		
NO 147747	C	19830608		
NL 7412829	A	19750415	NL 1974-12829	19740927
NL 187854	B	19910902		
NL 187854	C	19920203		
DD 118075	A5	19760212	DD 1974-181462	19741002
AU 7473916	A	19760408	AU 1974-73916	19741002
CA 1063125	A1	19790925	CA 1974-210670	19741003
IL 45779	A	19780615	IL 1974-45779	19741004
GB 1474459	A	19770525	GB 1974-43372	19741007
GB 1474460	A	19770525	GB 1976-26849	19741007
FR 2247218	A1	19750509	FR 1974-33813	19741008
AT 7408078	A	19770715	AT 1974-8078	19741008
ZA 7406440	A	19760526	ZA 1974-6440	19741009
HU 169587	B	19761228	HU 1974-ME1782	19741009
RO 64568	A1	19790315	RO 1974-80173	19741009
RO 71480	A1	19830803	RO 1974-87617	19741009
BE 820918	A1	19750410	BE 1974-149400	19741010
BE 820919	A1	19750410	BE 1974-149401	19741010
PL 98342	B1	19780429	PL 1974-174737	19741010
CH 610290	A5	19790412	CH 1974-13658	19741010
CS 190439	B2	19790531	CS 1974-6931	19741010
CH 613933	A5	19791031	CH 1974-3565	19741010
SU 738509	A3	19800530	SU 1974-2075603	19741010
DE 2463215	C2	19860313	DE 1974-2463215	19741010
JP 50076058	A	19750621	JP 1974-116987	19741011
JP 59039415	B	19840922		
AT 7700092	A	19780515	AT 1977-92	19770111
AT 347435	B	19781227		
US 4177285	A	19791204	US 1978-889161	19780323
US 4182764	A	19800108	US 1978-889160	19780323
FI 8000415	A	19800211	FI 1980-415	19800211
FI 60388	B	19810930		
FI 60388	C	19820111		
JP 57209246	A	19821222	JP 1982-83345	19820519
NL 9100396	A	19910603	NL 1991-396	19910305
PRIORITY APPLN. INFO.:			US 1973-405736	19731011
			US 1974-492651	19740730
			US 1974-492652	19740730
			US 1974-492653	19740730
			FI 1974-2789	19740925
			AT 1974-8078	19741008
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			US 1975-585434	19750610
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GI

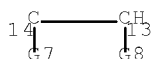


AB Diuretic and saluretic (no data) indanones I (X = O, S; X1 = C1-4 alkylene, haloalkylene; R = lower alkyl, alkenyl, phenylalkyl, phenylalkenyl, Ph, cycloalkyl, cycloalkylalkyl; R1 = Ph, optionally substituted by NO2, OH, lower alkyl, alkoxy, cycloalkyl, halogen, NH2, CN, SO2NH2, SMe, SO2Cl, CH2NH2, acylamino, acylaminomethyl; RR1 = alkylene; R2 = H, lower alkyl, Ph; R3 = halogen, Me, trihalomethyl; R4 = H, halogen, Me; R3R4 = C3-4 alkylene) were prepared Thus, 2,3-Cl2C6H3OMe was treated with PhCH2COCl to give 2,3,4-Cl2(PhCH2CO)C6H2OMe which was treated with (Me2N)2CH2 to give 2,3,4-Cl2(MeO)C6H2COCPh:CH2. Cyclization of the latter compound gave indanone II (R5 = Me, R6 = H), which was demethylated to II (R5 = R6 = H). Reaction of II (R5 = R6 = H) with ICH2CO2H gave II (R5 = CH2CO2H, R6 = H), which was methylated to II (R5 = CH2CO2H, R6 = Me).

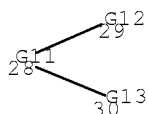
MSTR 1



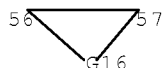
G1 = 14-8 13-6 14-11



G2 = 28

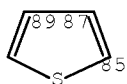


G6 = 56-1 57-5



G7 = 2-thienyl

G11 = 85-9 87-29 89-30



G16 = R <"hydrocarbylene group containing from 3 to 6 carbon atoms">

Patent location: claims

Note: record may include structures from disclosure

L16 ANSWER 528 OF 528 MARPAT COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 89:75373 MARPAT Full-text

TITLE: Azolyl-9,10-dihydroanthracene derivatives

INVENTOR(S): Buechel, Karl Heinz; Kraemer, Wolfgang; Plempel, Manfred; Haller, Ingo

PATENT ASSIGNEE(S): Bayer A.-G., Fed. Rep. Ger.

SOURCE: Ger. Offen., 32 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

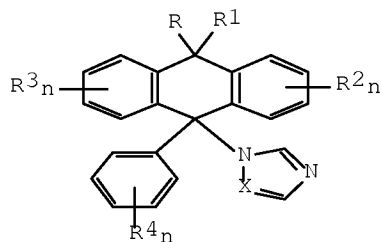
LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

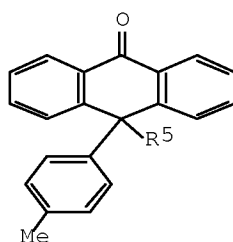
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2650171	A1	19780511	DE 1976-2650171	19761030
US 4183940	A	19800115	US 1977-840461	19771007
GB 1534835	A	19781206	GB 1977-44333	19771025
CH 629786	A5	19820514	CH 1977-12986	19771025
FI 7703209	A	19780501	FI 1977-3209	19771027
SE 7712111	A	19780501	SE 1977-12111	19771027
NL 7711830	A	19780503	NL 1977-11830	19771027
BE 860249	A1	19780428	BE 1977-182160	19771028
DK 7704803	A	19780501	DK 1977-4803	19771028
JP 53056666	A	19780523	JP 1977-128815	19771028
FR 2369278	A1	19780526	FR 1977-32559	19771028
FR 2369278	B1	19800613		
AT 7707732	A	19790915	AT 1977-7732	19771028
PRIORITY APPLN. INFO.:			DE 1976-2650171	19761030

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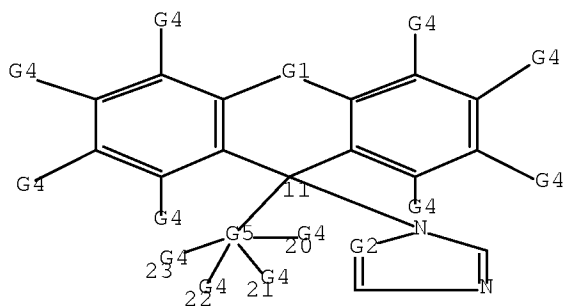


I



II

AB Anthracenes I (X = CH, N; RR1 = O; R = optionally substituted Ph, R1 = imidazolyl, triazolyl; R2-R4 = halogen, alkyl, haloalkyl, alkoxy, alkylthio; n = 0-4) were prepared. Thus, Grignard reaction of anthraquinone with 4-BrC6H4Me gave II (R5 = OH), which was chlorinated with SOCl2. Reaction of II (R5 = Cl) with imidazole gave II (R5 = 1-imidazolyl), which had a min. inhibitory concentration against *Trichophyton mentagrophytes* ≤ 1 mg/mL.



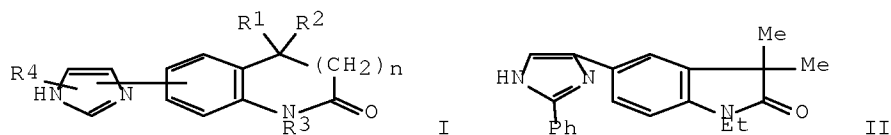
G1 = 33

$$G2 = CH$$

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=> d 116 ibib abs fqhit 510-519
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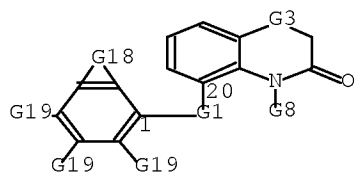
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3935514	A1	19910502	DE 1989-3935514	19891025
WO 9106545	A1	19910516	WO 1990-EP1788	19901020
W: AU, CA, FI, HU, JP, KR, NO, SU, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
AU 9170421	A	19910531	AU 1991-70421	19901020
EP 497852	A1	19920812	EP 1990-916287	19901020
EP 497852	B1	19951220		
R: AT, CH, DE, FR, GB, IT, LI				
AT 131821	T	19960115	AT 1990-916287	19901020
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			WO 1990-EP1788	19901020

GI

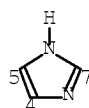


AB Title compds. [I; R1 = H, alkyl, alkenyl, cycloalkyl; R2 = alkyl, alkenyl, cyano, CO₂H, alkylcarbonyl, alkoxy carbonyl, aminocarbonyl, hydrazinocarbonyl; or R1R2 = (cyclo)alkylidene; R3 = H, alkyl, alkenyl, alkynyl, cycloalkyl, PhCH₂, carboxylkyl, alkoxy carbonylalkyl, dimethyloxophosphinylmethyl; R4 = pyridyl, (substituted) Ph; n = 0, 1], were prepared as erythrocyte- and thrombocyte aggregation inhibitors (no data). Thus, a mixture of 1,3-dihydro-3,3-dimethyl-1-ethyl-(2H)-indol-2-one, ClCH₂COCl, and AlCl₃ in CH₂Cl₂ was refluxed 2 h to give 74% 1,3-dihydro-3,3-dimethyl-1-ethyl-5-(2-chloro-1-oxoethyl)-(2H)-indol-2-one. The latter was refluxed with benzamidine in EtOH to give 56% title compound II.

MSTR 1B



G1 = 5-1 4-20 / 5-1 7-20 / 4-1 5-20 / 4-1 7-20 /
7-1 5-20 / 7-1 4-20

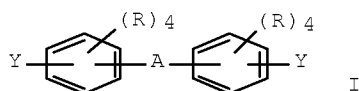


G18 = R <"group to form a ring">
 G19 = imidazolyl
 Derivative: and tautomers and physiologically acceptable salts
 Patent location: claim 1
 Stereochemistry: and optically active forms

L16 ANSWER 511 OF 528 MARPAT COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 115:72483 MARPAT Full-text
 TITLE: Mesogenic cyanate-functional maleimides and thermosets thereof
 INVENTOR(S): Hefner, Robert E., Jr.; Earls, Jimmy D.
 PATENT ASSIGNEE(S): Dow Chemical Co., USA
 SOURCE: Eur. Pat. Appl., 85 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 409070	A2	19910123	EP 1990-113297	19900712
EP 409070	A3	19920304		
EP 409070	B1	19990303		
R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL, SE				
AT 177079	T	19990315	AT 1990-113297	19900712
CA 2021289	A1	19910118	CA 1990-2021289	19900716
KR 159094	B1	19981201	KR 1990-10789	19900716
JP 03141256	A	19910617	JP 1990-187316	19900717
PRIORITY APPLN. INFO.:			US 1989-380936	19890717

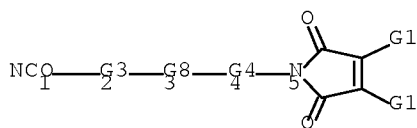
GI



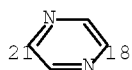
AB Title compds., such as I (one Y is cyanate and the other maleimide, and they are para to each other; R's are independently H, C1-10 hydrocarbyl(oxy), halo, nitro, nitrile, Ph; A is a divalent moiety), contain ≥ 1 cyanate group, ≥ 1 maleimide group, and ≥ 1 mesogenic or rodlike moiety. Curable compns. may contain compds. like I and ≥ 1 of mesogen group-free polycyanate or polycyanamide, epoxy resin, polymaleimide, polyamine, polyphenol, ethylenically unsatd. compound, etc., are oriented during curing, and the latter may be accomplished by an elec. or magnetic field or shear forces. Thus, the cyanate of 4-hydroxy-4'-aminobenzanilide maleimide 2.35 and ibsphenol A dicyanate 7.05 g were ground together to a powder, and 5.0 g of the blend was heated to 125° to give a paste, which was catalyzed by mixing in Co naphthenate 0.0005 g in 0.3 mL CH₂Cl₂. The catalyzed blend was heated to 140° and held 11 min. Removing, degassing in vacuo, pouring into the reservoir of an injection molder at 140°, injecting through an orifice into a

mold at 140°, transferring the filled mold to an oven, heating to 177° for 2 h, 200° for 2 h, and 240° for 2 h, and cooling to 25° gave a thermoset with glass temperature 228.5°, tensile modulus (at 40 and 160°) 1.430 and 1.146 GPa, resp., and mean linear coefficient of thermal expansion 48 ppm/°K.

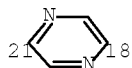
MSTR 1C



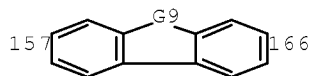
G3 = 21-1 18-3



G4 = 21-3 18-5



G8 = 157-2 166-4



G9 = CH2CH2

Patent location: claim 2

L16 ANSWER 512 OF 528 MARPAT COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 114:247124 MARPAT Full-text

TITLE: Photochromic diarylmaleic acid derivatives and preparation of diarylethenes

INVENTOR(S): Sumiya, Ritsuo; Ishikawa, Masaji; Sayo, Koichi; Irie, Masahiro

PATENT ASSIGNEE(S): Kanebo, Ltd., Japan

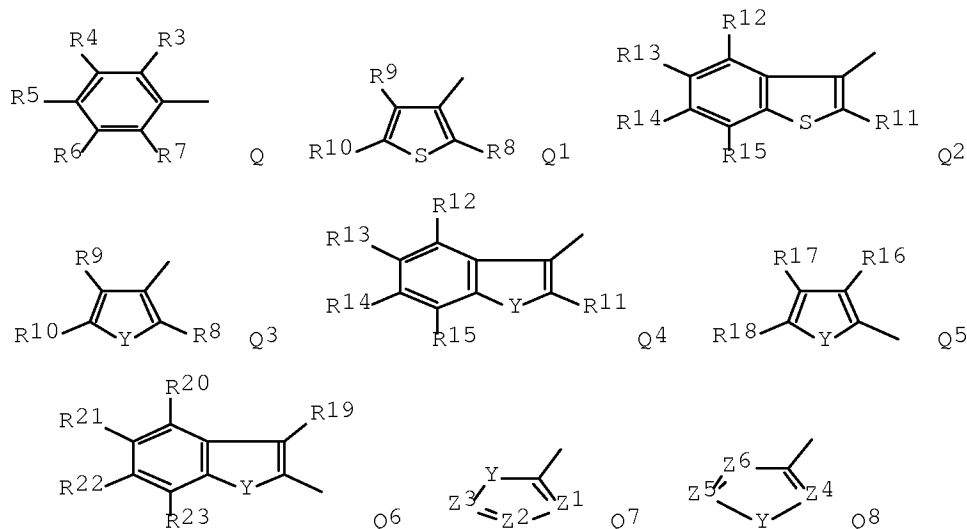
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

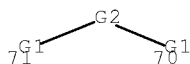
DOCUMENT TYPE: Patent

LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

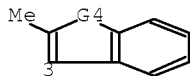
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03014538	A	19910123	JP 1989-183960	19890717
JP 07042248	B	19950510		
PRIORITY APPLN. INFO.:			JP 1989-72352	19890323
OTHER SOURCE(S):			CASREACT 114:247124	
GI				



AB R1OCOAl:CA2CO2R2 (I; R1, R2 = H, aliphatic hydrocarbyl; A1, A2 = Q, Q1, Q2; R3, R7 = F, Me; R4 - R6, R9, R10, R12 - R15 = H, F, aliphatic or alicyclic hydrocarbyl, cyano) and a process for the preparation of R1AlC:CA2R2 (R1, R2 = H, aliphatic or alicyclic hydrocarbyl, aryl, alkoxy, alkoxycarbonyl, acyl, cyano; R1 and R2 may be bonded to form a ring; A1, A2 = aryl, heterocyclyl, e.g. Q, Q3 - Q8; R3 - R23 = H, F, aliphatic or alicyclic hydrocarbyl, aryl, haloalkyl, alkoxy, alkoxycarbonyl, acyl, cyano; Y = O, S, NR24; R24 = alkyl; Z1 - Z6 = N, substituted carbon; ≥1 of Z1- Z3 and Z4 - Z6 = N) by substitution of AlX (X = Cl, Br, iodine) with metal compds. and treatment of the resulting organic metal compds. with R1C.tplbond.CR2 then A2X are claimed. A hexane solution of BuLi was added dropwise to 3-bromo-2-methylbenzothiophene (II) in Et2O at -70° and the reaction mixture was stirred at -70° for 30 min, subsequently an Et2O solution of Cu dicyclohexylamide (prepared from dicyclohexylamine, MeLi, and Cu iodide) was added dropwise and the mixture was stirred for 40 min. The reaction mixture was further treated with an Et2O solution of MeOCOC.tplbond.CCO2Me for 1 h then a THF solution of II and tetrakis(triphenylphosphine)palladium while heating to room temperature over 12 h to give 48% I (R1 = R2 = Me, A1 = A2 = 2-methylbenzothiophen-3-yl) (III). A benzene solution of III with light yellow became dark yellow on UV irradiation, this colored state was stable on keeping at 37° over 2 wks. and decolorized on irradiation with visible light.



G1 = 3



G2 = 83-71 84-70



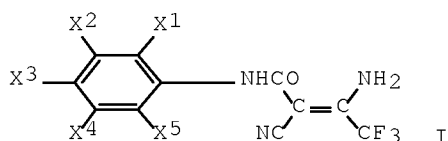
G4 = 0

G7 = R <"group to form a ring">

Patent location: claim 2

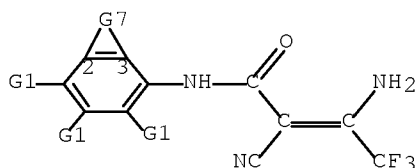
L16 ANSWER 513 OF 528 MARPAT COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 114:185036 MARPAT Full-text
 TITLE: Preparation of 3-amino-2-cyano-4,4,4-trifluorocrotonic acid amide as insecticides
 INVENTOR(S): Hayashi, Syunji; Yamanaka, Satoshi; Kawaguchi, Sayoko; Ishii, Teruhiko; Kimata, Toshiya; Misu, Naoaki
 PATENT ASSIGNEE(S): SDS Biotech K. K., Japan
 SOURCE: Eur. Pat. Appl., 37 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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EP 397052	A1	19901114	EP 1990-108453	19900504
EP 397052	B1	19930818		
R: CH, DE, FR, GB, IT, LI				
US 5066657	A	19911119	US 1990-520411	19900508
JP 03095150	A	19910419	JP 1990-117711	19900509
PRIORITY APPLN. INFO.:			JP 1989-114090	19890509
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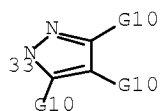


AB The title compds. [I; X1-X5 = H, halo, (substituted) alkyl, alkoxy, alkanesulfonyl, alkanesulfonyloxy, benzenesulfonyl, benzenesulfonyloxy, or alkylthio, NO₂, haloalkoxy, dialkylamino, SO₂R₁, etc.; R₁ = (halo)alkyl, alkoxycarbonyloxy, (substituted) alkoxycarbonyl, CH:NOR₂; R₂ = alkyl, (substituted) pyrazol-1-yl or pyridyloxy; or X₁X₂ or X₂X₃ forming a ring], which has broad insecticidal activity against noxious insects, particularly Diptera and Lepidoptera, are prepared Thus, acetylation of 3,5-(CF₃)₂C₆H₃NH₂ with ClCH₂COCl in CH₂Cl₂ containing Et₃N and cyanation of the resulting 3,5-(CF₃)₂C₆H₃NHCOCH₂Cl with KCN in H₂O-Me₂SO gave 3,5-(CF₃)₂C₆H₃NHCOCH₂CN which was condensed with CF₃CN(g) in EtOH/Me₂C(OMe)₂ containing AcONa at -78° for 3 h and then at room temperature over 1 day to give I (X₁ = X₃ = X₅ = H, X₂ = X₄ = CF₃). Altogether 104 I were prepared and 29 of 40 I tested at 500 ppm gave 100% mortality to *Spodoptera litua*.

MSTR 1D



G1 = 33



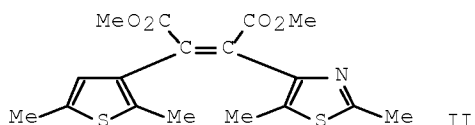
G7 = R <"group to form a ring">
Patent location: claim 1

L16 ANSWER 514 OF 528 MARPAT COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 114:101711 MARPAT Full-text
TITLE: Preparation of di(hetero)arylethene derivatives as
photochromic compounds
INVENTOR(S): Sumiya, Ritsuo; Ishikawa, Masaji; Sayo, Koichi; Irie,
Masahiro
PATENT ASSIGNEE(S): Kanebo, Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

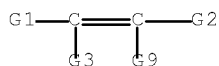
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02250877	A	19901008	JP 1989-72353	19890323
PRIORITY APPLN. INFO.:			JP 1989-72353	19890323

GI

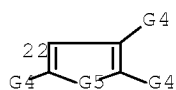


AB ARC:CA1R1 (I; A, A1 = aryl, heterocyclyl; R, R1 = H, aliphatic hydrocarbyl, alicyclic hydrocarbyl, aryl, haloalkyl, etc.), useful as photochromic compds. in recording materials (no data), are prepared A solution of MeLi in Et2O was added dropwise to Me3SnSnMe3 in THF at -20° under N, the solution was stirred, cooled to -48°, CuBr-Me2S complex was added with stirring, the solution was cooled to -78°, a solution of MeO2CC.tplbond.CCO2Me in THF was added with stirring, followed by (Ph3P)4Pd and a solution of 4-iodo-2,5-dimethylthiazole in THF, the solution warmed to room temperature slowly, 3-iodo-2,5-dimethylthiophene was added, and the solution was refluxed to give 28% II. Also prepared were 14 addition I.

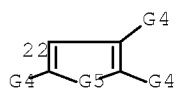
MSTR 5A



G3 = 22



G5 = 0
 G9 = 22



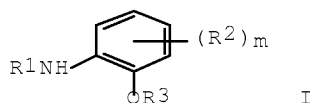
G1 +G2 = R <"moiety necessary to complete a ring">

Patent location: claim 1

L16 ANSWER 515 OF 528 MARPAT COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 113:97186 MARPAT Full-text
 TITLE: Preparation of alkoxy- and aryloxybenzenes
 INVENTOR(S): Yamakawa, Kazuyoshi
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 19 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

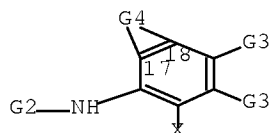
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02076842	A	19900316	JP 1989-160789	19890626
JP 07091248	B	19951004		
US 5006660	A	19910409	US 1989-372544	19890628
PRIORITY APPLN. INFO.:			JP 1988-159419	19880629

GI

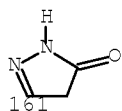


AB The title ethers (I; R1 = heterocycllyl, aryl, alkylsulfonyl, etc.; R2 = substituent; R3 = alkyl, aryl; m = 0-4), useful as intermediates for agrochems., drugs, and dyes, and prepared Refluxing 2-BrC6H4NH2 and Ac2O in MeCN gave 75% 2-BrC6H4NHAc, which was refluxed with CuCl and 8-quinolinol in MeOH containing NaOMe to give 95% anisole derivative I (R1 = Ac, R3 = Me, m = 0). Also prepared were 6 addnl. I. In 6 comparison examples wherein Cu salt, base, and/or amine were not used, the desired ethers were not obtained.

MSTR 1B



G3 = 161



G4 = R <"ring-forming group">
Patent location: claims

L16 ANSWER 516 OF 528 MARPAT COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 113:49918 MARPAT Full-text
TITLE: Thermal recording material containing bleachable ylide dye
INVENTOR(S): Filosa, Michael P.; Herchen, Stephen R.; Petersen, Cheryl P.
PATENT ASSIGNEE(S): Polaroid Corp., USA
SOURCE: U.S., 9 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

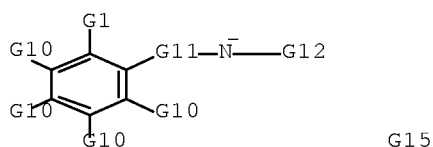
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4894358	A	19900116	US 1988-238476	19880831
PRIORITY APPLN. INFO.:			US 1988-238476	19880831

OTHER SOURCE(S): CASREACT 113:49918

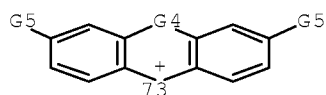
GI For diagram(s), see printed CA Issue.

AB A thermal recording material comprises a support carrying colored recording layer comprising a film-forming binder and a ylide dye represented by the general formula I (Z,Z1 = a moiety to complete the auxochromophoric system of a triarylmethane dye, Z and Z1 together may represent the bridged moiety to complete the auxochromophoric system of a bridged triarylmethane dye; R = H or a monovalent radical; n = 1-4; L = CO, CH2, C2H4, or SO2; A+ = N+ = N, S+R1, or II; R1 = aryl; B = a group of atoms required to complete a heterocyclic ring; X- = an anion). Upon reducing with a heated stylus, the dye cleaves at the N-A+ bond with the N atom bonding to the meso C atom to form a 5- or 6-membered ring and rendering the dye colorless. The thermal bleaching of the dye can be enhanced and the activation temperature lowered by providing a reducing environment, for example, by incorporating a certain developer, such as phenidone.

MSTR 1

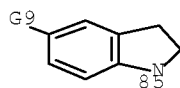


G1 = 73



G4 = R <"moiety containing heteroatom">

G5 = 85



Patent location: claim 1

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 517 OF 528 MARPAT COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 112:243146 MARPAT Full-text
 TITLE: Optical information recording media
 INVENTOR(S): Hamada, Emiko; Ishiguro, Takashi
 PATENT ASSIGNEE(S): Taiyo Yuden Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 01275095	A	19891102	JP 1988-102624	19880427
JP 2585056	B2	19970226		

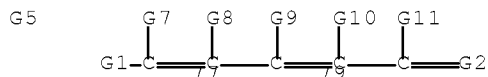
PRIORITY APPLN. INFO.: JP 1988-102624 19880427

GI For diagram(s), see printed CA Issue.

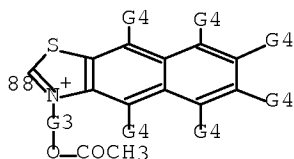
AB The title media contain carbocyanine dye I (Z1-2 = C1-5-alkylene; R1-2 = H, alkyl, alkoxy, allyl, hydroxyalkyl, carboxyalkyl, amino, dialkylamino, NO2, aralkyl; m, n = 0 - 3; X1 = anion), or II [Z3-4 = C1-5-alkyl; A1-2 = (substituted) naphthalene rings; X2 = anion; central methine group may have halo or alkyl substituents, or form a part of a ring]. These provide high reflectivity to 780-nm laser beam, and decrease of signal jitter due to pit fringes. Thus, an acrylic disk coated with 700-Å layer of I (Z1-2 = ethylene,

R1-2 = H) was used for recording with 780-nm laser; reflectivity was 42%, and duration of signal jitter was 24 ns.

MSTR 2



G1 = 88



G7 +G8 = R

G9 +G10= R

Patent location: claim 1

L16 ANSWER 518 OF 528 MARPAT COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 112:208053 MARPAT [Full-text](#)

TITLE: Optical recording medium using a photochemical coloring reaction of diindolylethylene derivative

INVENTOR(S): Tamura, Kazutaka; Mori, Yoichi

PATENT ASSIGNEE(S): Toray Industries, Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

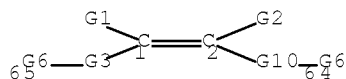
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 01207740	A	19890821	JP 1988-33695	19880216
PRIORITY APPLN. INFO.:			JP 1988-33695	19880216

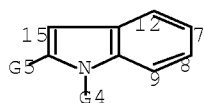
AB Optical recording medium contains in its recording layers a 1,2-diindolylethylene derivative as a coloring agent and a halogen-containing compound. The medium enables high d. recording and gives a stable recorded image. Thus, a toluene solution containing 1,2-bis[3-(2-methylindolyl)]-1,2-dimethylethylene 10, 1,3,5-trichlorobenzene 20, and polystyrene 70 parts was spin-coated on a glass substrate to form a recording layer which was colorless and 2 μ m in thickness. Irradiation of 360 nm light beam (diameter of 0.6 μ m) from an excimer laser to the recording layer caused a color change to blue in the exposed area. The information thus recorded was read out by scanning a 630 nm beam of a He-Ne laser to achieve a carrier to noise ratio for rerecording of 40 dB. The recorded medium was left under room temperature for

a year to show that no bleaching had took place and the colored image was very stable.

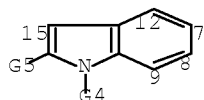
MSTR 1A



G3 = 15-1 12-65 / 15-1 7-65 / 15-1 8-65 /
15-1 9-65



G10 = 15-2 12-64 / 15-2 7-64 / 15-2 8-64 /
15-2 9-64



G1 +G2 = R <"ring">

Patent location: disclosure

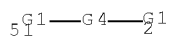
L16 ANSWER 519 OF 528 MARPAT COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 112:207926 MARPAT Full-text
TITLE: Toners for electrostatic image development
INVENTOR(S): Hagiwara, Kazuyoshi; Tanaka, Katsuhiko
PATENT ASSIGNEE(S): Canon K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 01279258	A	19891109	JP 1988-107573	19880502
PRIORITY APPLN. INFO.:			JP 1988-107573	19880502

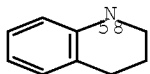
AB Pos.-charging toners for electrostatic image development contain a diaminobenzene derivative selected from C6R2R3R4R5(NRR1)2 [R = (un)substituted aryl; R1 = (un)substituted alkyl; R and R1 may form a ring; R2-5 = H,

(un)substituted alkyl, (un)substituted aryl, amino, aralkyl, alkoxy, acyloxy, acylamido, identical or different, adjacent groups may form a ring]. The toners show excellent chargeability, environmental stability, and good color gradation. Thus, a mixture of Bu methacrylate-styrene copolymer, Cu phthalocyanine, low mol. weight polyethylene wax, and 1,2-di(methylphenylamino)benzene was kneaded, then pulverized, and mixed with a coated ferrite carrier to give a developer, which gave high-d. blue images.

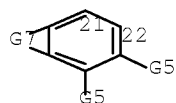
MSTR 1A



G1 = 58



G4 = 21-2 22-51



G7 = R

Patent location: claims

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L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

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L3          1 S E3
L4          148436 S 2508.17/RID
L5          46 S L1 SAM SUB=L4
L6          25730 S 2508.17/RID AND 4-8/N
L7          39 S L1 SAM SUB=L6
            E BENZIMIDAZOLE/CN
L8          1 S E3
L9          1101 S 2508.17/RID AND 333.401/RID
L10         5 S L1 SAM SUB=L9
L11         53 S L1 FUL SUB=L9
L12         47 S L11 AND CAPLUS/LC
L13         6 S L11 NOT L12

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